

**STRATEGIES TO FACILITATE THE AVAILABILITY AND ACCESSIBILITY OF THE
PREVENTION OF MOTHER-TO-CHILD TRANSMISSION PROGRAMME IN THE
BOJANALA HEALTH DISTRICT OF THE NORTH WEST PROVINCE:
SOUTH AFRICA**

by

DEBBIE KGOMOTSO HABEDI

submitted in accordance with the requirements
for the degree of

DOCTOR OF LITERATURE AND PHILOSOPHY

in the subject

HEALTH STUDIES

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: PROF AGW NOLTE

CO-SUPERVISOR: DR MA TEMANE

February 2015

Student Number: **32401760**

DECLARATION

I declare that **STRATEGIES TO FACILITATE THE AVAILABILITY AND
ACCESSIBILITY OF THE PREVENTION OF MOTHER-TO-CHILD TRANSMISSION
PROGRAMME IN THE BOJANALA HEALTH DISTRICT OF THE NORTH WEST
PROVINCE: SOUTH AFRICA** is my own work and that all the sources that I have used
or quoted have been indicated and acknowledged by means of complete references.

SIGNATURE

Debbie Kgomotso Habedi

20 February 2015

DATE

**STRATEGIES TO FACILITATE THE AVAILABILITY AND ACCESSIBILITY OF
THE PREVENTION OF MOTHER-TO-CHILD TRANSMISSION PROGRAMME
IN THE BOJANALA HEALTH DISTRICT OF THE NORTH WEST PROVINCE:
SOUTH AFRICA**

STUDENT NUMBER: 32401760
STUDENT: Debbie Kgomotsi Habedi
DEGREE: D Litt et Phil
DEPARTMENT: Health Studies
SUPERVISOR: Prof AGW Nolte
CO-SUPERVISOR: Dr MA Temane

ABSTRACT

Human Immunodeficiency Virus is the leading cause of death among women of reproductive age worldwide. It is also a major contributor to infant mortality. The effective application of prevention of mother-to-child transmission strategies effectively reduces the risk of mother-to-child transmission. The intent of this study was to determine the availability and accessibility of the PMTCT programme in one district of the North West Province of South Africa. A qualitative, explorative, descriptive and contextual design was utilised to gain better understanding of the experiences of both the HIV positive pregnant women and the Health Care Workers regarding the availability and access to the PMTCT programme. The study population consisted of HIV positive pregnant women between 18 and 49 years of age and Health Care Workers aged between 21 to 60 years of age. The non-probability purposive sampling technique was utilised to identify potential research participants. Data were collected by means of individual semi-structured interviews with HIV positive pregnant women and focus group discussions with the Health Care Workers. Adherence to Tesch's eight descriptive methods was utilised as the primary form of data analysis, organisation and interpretation.

The findings of the study revealed that availability and accessibility of PMTCT services are still problematic. Distance, waiting periods, and long queues were among the few mentioned as problematic. There were also few positives such as communication, counseling and health education. Strategies for facilitation of the availability and accessibility of the PMTCT programme were developed based on the findings. Themes emerged from the HIV positive pregnant women's data included: acceptance of one's sero positive status, maternal concerns, stressors about HIV status, as well as lack and shortage of resources and support by health care professionals and family; while emerging themes from the Health Care Workers included: fear of disclosure by HIV positive pregnant women, child feeding, formal trainings and workshops on PMTCT programme, as well as lack and shortage of resources and loss to follow-up activities.

KEY CONCEPTS:

Strategies; facilitation; availability; accessibility; prevention of mother-to-child transmission; programme.

ACKNOWLEDGEMENTS

- First and foremost, I thank the Lord Almighty, my Creator and my Shepherd for the love, protection and answers to my prayers.
- My sincerest thanks go to my thesis supervisors, Prof AGW Nolte and Dr MA Temane of the University of Johannesburg for all their assistance, encouragement, all of which guided this study to the desired degree of success.
- My most heartfelt gratitude to my parents, Mr and Mrs Ramorake and Mmadisele Habedi (nee Modise), my brothers, Lesiba and Motidi and sisters Moipone and Mmamasedi. “*Bahurutshe ba Bo-Manyane a Phofu e rweleng diala, dilo tsa Bo-Nchaupe wa Bakgatla.*” Their unflinching and steadfast commitment to my studies has always been a pillar of strength even under very trying circumstances’.
- ‘Ramo’ my partner, whose unconditional love and support became the forte of my resilience throughout this study.
- Retired (but not tired!) Prof D Van Wyk, the 2012 Unisa Young Academic Programme (YAP) Coordinator whose continuous motivation encouragement spurred me on. “*Baie dankie vir alles, Pa!*”
- Prof GB Thupayagale-Tshweneagae, my mentor during the 2012-2013 Unisa College of Human Sciences (CHS) Mentorship programme, for the belief in my potential.
- Prof MC Matlakala and Prof LI Zungu in the Department of Health Studies at Unisa for their willingness to share relevant information and ideas.
- Unisa Librarians, Mrs Talana Erasmus, Mrs Bongi Maema and Mr James Kobane for their patience and very competent assistance.
- Mr Sicelo Sengwayo, my research assistant for his exceptional data collection skills.
- The North West Province’s Department of Health for granting permission to conduct the study in the Madibeng Health sub-district.
- Dr John Tumbo, Mrs Mmule Rakau and Mr Ishmael Moloi, the managers in the Bojanala Health District and Madibeng Health sub-district, for their valuable insight on the dynamics of the research milieu.
- Most of all, the HIV-positive pregnant women and Health Care Workers who volunteered their time to share their critical experiences in the context of the extent of the availability and accessibility of the PMTCT programme in the Bojanala Health District.
- Dr TJ Mkhonto the editor and Mrs R Coetzer for formatting the manuscript.

Dedication

This academic exegesis is dedicated posthumously to my late sister Ms Motswagole Bertha Habedi, born on 18 November 1971 and died on 11 May 1972. Unseen, unheard, but always near; still loved, still missed and very dear.

The dedication is equally accorded to my late uncle as well, Mr Tladi William Habedi, born on 03 August 1932 and died on 07 May 1997. Always on my mind and forever in my heart.

TABLE OF CONTENTS

CHAPTER 1

ORIENTATION TO THE STUDY

1.1	INTRODUCTION	1
1.2	BACKGROUND INFORMATION ABOUT THE RESEARCH PROBLEM	1
1.3	STATEMENT OF THE RESEARCH PROBLEM.....	3
1.4	RESEARCH PURPOSE.....	5
1.4.1	Research objectives.....	5
1.4.2	Overall research questions	5
1.4.3	Specific research questions	6
1.5	SIGNIFICANCE OF THE STUDY	6
1.6	DEFINITION OF TERMS	7
1.7	THEORETICAL FOUNDATIONS OF THE STUDY.....	9
1.7.1	Research paradigm.....	9
1.7.2	Theoretical framework	10
1.8	RESEARCH DESIGN AND METHOD	11
1.8.1	Qualitative research.....	11
1.8.2	Exploratory research.....	11
1.8.3	Descriptive research	12
1.8.4	Contextual research.....	12
1.8.5	Phase1: The exploration and description of the participants' experiences with regards to the availability and accessibility of the PMTCT programme.....	13
1.8.5.1	Research setting	13
1.8.5.2	Population.....	13
1.8.5.3	Sampling criteria	13
1.8.5.4	Data collection	14
1.8.5.4.1	Semi-structured individual interviews (IDIs)	14
1.8.5.4.2	Focus group discussions (FGDs).....	15
1.8.5.4.3	Field notes	15
1.8.5.5	Data analysis	15
1.8.6	Phase 2: Development of a conceptual framework to facilitate the availability and accessibility of the PMTCT programme	16
1.8.7	Phase 3: Development of strategies to facilitate the availability and accessibility of the PMTCT programme	16
1.9	SCOPE OF THE STUDY	16

1.10	MEASURES TO ENSURE TRUSTWORTHINESS.....	16
1.10.1	Credibility	17
1.10.2	Transferability	17
1.10.3	Dependability	17
1.10.4	Confirmability	18
1.11	ETHICAL CONSIDERATIONS.....	18
1.11.1	Protecting the rights of the institutions	18
1.11.2	Principle of respect for autonomy of persons.....	19
1.11.3	Principle of beneficence	19
1.11.4	Principle of justice	19
1.11.5	Researcher integrity.....	20
1.12	STRUCTURE OF THE THESIS.....	21
1.11	CONCLUSION	22

CHAPTER 2

OVERVIEW OF THE PMTCT PROGRAMME IN SOUTH AFRICA

2.1	INTRODUCTION	23
2.2	PERPECTIVES OF THE PMTCT PROGRAMME'S AVAILABILITY AND ACCESSIBILITY	23
2.2.1	Purpose of the PMTCT programme	24
2.2.2	The impact of HIV infection on maternal deaths	25
2.2.3	The PMTCT programme's efficacy in reducing HIV and AIDS in children	26
2.2.4	The efficacy of antiretroviral treatment for PMTCT of HIV	26
2.2.5	Achievements and strengths of the PMTCT programme's availability and accessibility	27
2.2.6	Challenges, constraints and recommendations of the PMTCT programme's availability and accessibility	28
2.3	SOUTH AFRICA'S NEW HIGHLY EFFECTIVE PMTCT PROGRAMME GUIDELINES	31
2.4	INTEGRATION OF THE PMTCT PROGRAMME AND MATERNAL NEONATAL CHILD WOMEN HEALTH (MNCWH) SERVICES	31
2.5	THE NORTH WEST PROVINCE'S (NWP'S) EXPERIENCES OF THE PMTCT PROGRAMME	33
2.5.1	Achievements and strengths of the PMTCT programme's availability and accessibility in the North West Province	33
2.5.2	Challenges, constraints and recommendations of the PMTCT programme's availability and accessibility	34
2.6	RESOURCES THAT AFFECT THE PMTCT PROGRAMME'S AVAILABILITY AND ACCESSIBILITY	36
2.6.1	Human resources.....	36
2.6.2	Infrastructural resources	37
2.6.3	Policy imperatives	37
2.6.4	Institutionalisation of trainings.....	38

2.6.5	External stakeholder involvement	39
2.6.6	The role of support groups	39
2.7	CONCLUSION	39

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1	INTRODUCTION	41
3.2	RESEARCH PURPOSE.....	41
3.2.1	Research objectives	41
3.2.2	Overall research questions	42
3.2.3	Specific research questions	42
3.3	RESEARCH DESIGN AND METHOD	43
3.3.1	Qualitative research.....	43
3.3.2	Exploratory research.....	43
3.3.3	Descriptive research	44
3.3.4	Contextual research.....	44
3.3.5	Phase 1: Exploration and description of the experiences of both HIV-positive pregnant women and Health Care Workers with regards to the availability and accessibility of the PMTCT programme in Bojanala Health District.....	45
3.3.5.1	Research setting	45
3.3.5.2	Population	45
3.3.5.3	Sample criteria	45
3.3.5.4	Data collection	48
3.3.5.4.1	Semi-structured individual interviews (IDIs)	48
3.3.5.4.2	Focus group discussions (FGDs).....	49
3.3.5.4.3	Field notes	49
3.4	DATA COLLECTION PROCESS	50
3.4.1	The researcher's field experiences	52
3.4.2	Data analysis	52
3.4.3	Phase 2: Development of the conceptual framework to facilitate the availability and accessibility of the PMTCT programme	54
3.4.4	Phase 3: Development and validation of strategies to facilitate and improve the availability and accessibility of the PMTCT programme in the Bojanala Health District	54
3.5	PRE-TEST STUDY	54
3.6	MEASURES TO ENSURE TRUSTWORTHINESS.....	55
3.6.1	Credibility	55
3.6.2	Transferability	59
3.6.3	Dependability	60
3.6.4	Confirmability	62

3.7	ETHICAL CONSIDERATIONS.....	64
3.7.1	Ethical consideration related to data collection	64
3.7.2	Ethical Issues related to sampling.....	65
3.7.3	Enhancing scientific integrity of the study	66
3.8	CONCLUSION	66

CHAPTER 4

DISCUSSION OF FINDINGS AND LITERATURE CONTROL

4.1	INTRODUCTION	67
4.2	SAMPLE DESCRIPTION PER HEALTH CLUSTERS	67
4.2.1	Demographic profiles	67
4.3	QUALITATIVE DATA ANALYSIS.....	72
4.4	SUMMARY OF THE FINDINGS	72
4.5	DISCUSSION OF THE MAIN THEMES (HIV-POSITIVE PREGNANT WOMEN).....	74
4.6	THEMES, CATEGORIES AND SUB-CATEGORIES ACCRUING FROM HIV-POSITIVE PREGNANT WOMEN'S DATA ANLYSIS	77
4.6.1	Theme 1: Acceptance of one's sero positive status.....	77
4.6.1.1	Category 1.1: Acceptance of HIV just like any disease.....	77
4.6.1.2	Category 1.2: Acceptance of self and falling pregnant while HIV-positive	79
4.6.2	Theme 2: Maternal concerns	82
4.6.2.1	Category 2.1: Unknown HIV status prior to falling pregnant	82
4.6.2.2	Category 2.2: Help, health education and advises.....	86
4.6.3	Theme 3: Stressors about HIV status	90
4.6.3.1	Category 3.1: Emotional affection as a result of contracting diseases.....	91
4.6.4	Theme 4: Lack of and shortage of resources.....	96
4.6.4.1	Category 4.1: Long waiting periods and busyness of nurses.....	96
4.6.4.2	Category 4.2: Layout and size of facility	100
4.6.5	Theme 5: Support by health care professionals and family	103
4.6.5.1	Category 5.1: Satisfactory health care services offered by health care professionals	103
4.6.5.2	Category 5.2: Family support.....	108
4.7	DISCUSSION OF MAIN THEMES (HEALTH CARE WORKERS).....	111

4.8	THEMES, CATEGORIES AND SUB-CATEGORIES ACCRUING FROM HEALTH CARE WORKERS' DATA ANALYSIS.....	114
4.8.1	Theme 1: Fear of disclosure by HIV-positive pregnant women.....	114
4.8.1.1	Category 1.1: Non-disclosure due to stigmatisation.....	114
4.8.2	Theme 2: Child feeding	117
4.8.2.1	Category 2.1: Child feeding challenges	117
4.8.2.2	Category 2.2: Lack of knowledge with regard to child feeding	119
4.8.3	Theme 3: Formal in-service trainings and workshops on the PMTCT programme	122
4.8.3.1	Category 3.1: Lack of PMTCT programme knowledge	123
4.8.4	Theme 4: Lack of and shortage of resources.....	126
4.8.4.1	Category 4.1: Shortage of staff and medication.....	126
4.8.4.2	Category 4.2: Layout and size of facility	130
4.8.5	Theme 5: Loss to follow-up activities	131
4.8.5.1	Category 5.1: Unstable HIV-positive pregnant women	131
4.8.5.2	Category 5.2: Transport problems	134
4.9	CONCLUSION	136

CHAPTER 5

A CONCEPTUAL FRAMEWORK FOR THE FACILITATION OF PMTCT STRATEGIES

5.1	INTRODUCTION	137
5.2	CONCEPTUAL FRAMEWORK.....	137
5.3	THE QUALITY HEALTH OUTCOMES MODEL (QHOM)	137
5.3.1	Reasons for using QHOM.....	138
5.4	THE SURVEY LIST OF DICKOFF, JAMES AND WIEDENBACH	139
5.4.1	Reasons for using the survey list	139
5.5	DESCRIPTION OF THE CONCEPTUAL FRAMEWORK USING QHOM AND SURVEY LIST	141
5.6	BRIEF DESCRIPTION OF THE DEVELOPED CONCEPTUAL FRAMEWORK.....	143
5.6.1	System characteristics (context)	143
5.6.2	System characteristics (agents).....	144
5.6.3	Client characteristics (receiver or patient).....	148
5.6.4	Interventions (procedures)	150
5.6.5	Facilitation of resources and support by management of the sub-district	161
5.6.6	Outcomes/end results of procedures	161
5.6.7	Terminus	167

5.7	CONCLUSION	167
-----	------------------	-----

CHAPTER 6

STRATEGIES FOR FACILITATION OF THE AVAILABILITY AND ACCESSIBILITY OF THE PMTCT PROGRAMME FOR HIV- POSITIVE PREGNANT WOMEN

6.1	INTRODUCTION	168
6.2	STRATEGIES FOR FACILITATION OF THE AVAILABILITY AND ACCESSIBILITY OF THE PMTCT PROGRAMME.....	168
6.3	DEVELOPMENT OF THE STRATEGIES	169
6.4	DESCRIPTION OF THE STRATEGIES.....	170
6.5	STRATEGIES TO FACILITATE THE AVAILABILITY AND ACCESSIBILITY OF THE PMTCT PROGRAMME.....	170
6.5.1	Strategy 1: Promote regular site visits to motivate and support Health Care Workers and HIV-positive pregnant women regarding the services rendered and enrolment in the PMTCT programme.....	170
6.5.1.1	Rationale.....	170
6.5.1.2	Actions	171
6.5.2	Strategy 2: Improve adherence to antiretroviral treatment by HIV-positive pregnant women through enrolment and involvement in the PMTCT programme services	172
6.5.2.1	Rationale.....	172
6.5.2.2	Actions	172
6.5.3	Strategy 3: Sustain and enhance information system with regard to rendering the PMTCT programme services	174
6.5.3.1	Rationale.....	174
6.5.3.2	Actions	175
6.5.4	Strategy 4: Recruit, develop and retain Health Care Workers and increase ARVs stock and test kits in order to render the PMTCT programme services in health sub-district.....	177
6.5.4.1	Rationale.....	177
6.5.4.2	Actions	178
6.5.5	Strategy 5: Support the health care professionals, families and the HIV-positive pregnant women holistically with regard to the PMTCT services	180
6.5.5.1	Rationale.....	180
6.5.5.2	Actions	181
6.5.6	Strategy 6: Implement and strengthen effective counselling services by skilled competent Health Care Workers	182

6.5.6.1	Rationale	182
6.5.6.2	Actions	183
6.5.7	Strategy 7: Create opportunities for continued child feeding education and counselling	185
6.5.7.1	Rationale	185
6.5.7.2	Actions	185
6.5.8	Strategy 8: Promote and provide effective trainings and workshops for Health Care Workers, HIV-positive pregnant women, partners, families and communities.....	186
6.5.8.1	Rationale	186
6.5.8.2	Actions	188
6.5.9	Strategy 9: Develop and implement strategies to prevent loss to follow-up activities	190
6.5.9.1	Rationale	190
6.5.9.2	Actions	190
6.6	DESCRIPTION OF THE EVALUATED STRATEGIES	191
6.7	REVIEW OF THE STRATEGIES	194
6.8	CONLCUSION	196

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

7.1	INTRODUCTION	197
7.2	OVERVIEW OF THE STUDY	197
7.3	GENERAL CONCLUSIONS.....	199
7.4	RECOMMENDATIONS.....	199
7.4.1	Recommendations for nursing practice	199
7.4.2	Recommendations for education	201
7.4.3	Recommendations for research	202
7.4.4	Recommendations for policy making	202
7.5	CONTRIBUTIONS OF THE STUDY	203
7.6	LIMITATIONS OF THE STUDY	203
7.6.1	Challenges encountered	204
7.7	CONCLUDING REMARKS	205
7.8	PERSONAL REFLECTION.....	206
	REFERENCE LIST	207

LIST OF TABLES

Table 4.1	Table of participants – HIV-positive pregnant women (N=10).....	68
Table 4.2	Table of participants – Health Care Workers (N=21)	69
Table 4.3	Similar and different experiences of the HIV-positive pregnant women and the Health Care Workers.....	73
Table 4.4	Overview of the themes, categories and sub-categories of HIV-positive pregnant women's experiences.....	75
Table 4.5	Overview of the themes, categories and sub-categories of Health Care Workers.....	112
Table 6.1	PMTCT programme scores and evaluation criteria.....	191
Table 6.2	Expert PMTCT programme evaluators' Information.....	193
Table 6.3	Description of the separate scores from the individual evaluators	194
Table 6.4	Description of the scores from the evaluation group	196

LIST OF FIGURES

Figure 1.1	Map of Bojanala showing Madibeng	2
Figure 3.1	Counselling and testing process	134
Figure 5.1	Conceptual framework for available, accessible, effective and sustainable PMTCT programme	142

LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
AACN	American Association of Colleges of Nursing
ANC	Antenatal Care
ARVs	Antiretrovirals
ART	Antiretroviral Treatment/Therapy
BANC	Basic Antenatal Care
cART	Combination Antiretroviral Therapy
CCMT	Comprehensive Care Management Treatment
CHCs	Community Health Centres
CHCT	Couples HIV Counselling and Testing
CHCWs	Community Health Care Workers
CIHP	Centre for Integrated Health Programmes
CPD	Continuing Professional Development
CRF	Case Report Form
CTC	Care and Treatment Clinics
CYPR	Couple Year Protection Rate
DOH	Department of Health
DOTS	Direct Observed Treatment Supporters
eMTC	elimination of Mother-to-Child Transmission
EID	Early Infant Diagnosis
EPI	Expanded Programme on Immunisation
EFV	Efavirenz
EGPAF	Elizabeth Glazer Paediatric AIDS Foundation
FBOs	Faith Based Organisations
FDCs	Fixed-Dose Combinations
FGDs	Focus Group Discussions
FPD	Foundation for Professional Development
FP	Family Planning
FTC	Emtricitabine
HAART	Highly Active Antiretroviral Therapy
HAST	HIV/AIDS; STI and TB
HCT	Counselling and Testing
HDACC	Health Data Advisory and Co-ordination Committee
HIV	Human Immunodeficiency Virus
HPCSA	Health Professional Council of South Africa
HR	Human Resources

HSRC	Human Sciences Research Council
IMCI	Integrated Management of Childhood Illnesses
IDIs	Individual Interviews
LDP	Leadership Development Programme
LMICs	Low-and Middle-Income Countries
LTFU	Loss to Follow Up
M2M	Mother-to-Mother
MCH	Maternal and Child Health
MNCWH	Maternal Neonatal Child Women Health
MOU	Memorandum of Understanding
NCDs	Non-Communicable Diseases
NDoH	National Department of Health
NGOs	Non-Governmental Organisation
NIMART	Nurse Initiated Management of Antiretroviral Therapy
NPOs	Non-Profit Organisations
NPRIs	Non-Pregnancy-Related Infections
NSDA	Negotiated Service Delivery Agreement
NVP	Nevirapine
NWP	North West Province
PALSA PLUS	Practical Approach to Lung and HIV/AIDS in South Africa
PCR	Polymerase Chain Reaction
PEPFAR	Presidential Emergency plan for AIDS Relief
PHC	Primary Health Care
PHCs	Primary Health Centers
PI	Protease Inhibitors
PICT	Provider Initiated Counselling and Testing
PLHIV	People Living with HIV
PMTCT	Prevention of Mother-to-Child Transmission
QA	Quality Assurance
QHOM	Quality Health Outcome Model
QI	Quality Improvement
QMs	Quality Mentors
RTCs	Regional Training Coordinators
SANC	South African Nursing Council
SANAC	South African National AIDS Council
scAZT	Short Course Maternal AZT
SOPs	Standard Operating Procedures
SRHs	Sexual Reproductive Health Services

SSA	sub-Saharan Africa
STIs	Sexually Transmitted Infections
TAT	Turn Around Time
TDF	Tenofovir
UNISA	University of South Africa
VCT	Voluntary Counselling and Testing
WBOTS	Ward Based Outreach Team Supporters
WHO	World Health Organization

LIST OF APPENDICES

Appendix A:	Letter of Request for Permission to Conduct the Study	238
Appendix B:	North West Province Department of Health Permission to conduct research	240
Appendix C:	Unisa Ethical Clearance Certificate	241
Appendix D:	Informed Consent for HIV-Positive Pregnant Women	242
Appendix E:	Biographical Data of HIV-Positive Pregnant Women	244
Appendix F:	Interview Guide for HIV-Positive Pregnant Women.....	245
Appendix G:	Informed Consent of Health Care Workers	246
Appendix H:	Biographical Data of Health Care Workers.....	248
Appendix I:	Interview Guide for Health Care Workers.....	249
Appendix J:	Permission Letter to use the Madibeng Health Sub-District Facilities	250
Appendix K:	Table of Participants – HIV-Positive Pregnant Women (N=10)	251
Appendix L:	Table of Participants – Health Care Workers (N=21)	252
Appendix M:	Tswana Informed Consent for HIV-Positive Pregnant Women.....	255

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Human Immunodeficiency Virus (HIV) is the leading cause of death among women of reproductive age worldwide, and is also a major contributor to infant mortality. The effective application of prevention of mother-to-child transmission (PMTCT) strategies effectively reduces the risk of mother-to-child transmission (MTCT) from nearly 40% to less than 0,5% (WHO 2010b:1). The following are regarded as the main strategies for preventing HIV infections among women and infants:

- prevention of primary HIV among girls and women
- prevention of unintended pregnancies among women living with HIV
- reduction of MTCT (vertical transmission) of HIV by means of antiretroviral drug treatment or prophylaxis, safer deliveries, and infant feeding counselling
- provision of care, treatment, and support to women living with HIV and their families (UNAIDS 2011:22)

One of the key goals of the HIV and Acquired Immune Deficiency Syndrome (AIDS) and Sexually Transmitted Infections (STIs) Strategic Plan for South Africa was to reduce MTCT of HIV, with a target of less than 5% transmission in 2011 (WHO 2010:6). The PMTCT services have historically focused on providing voluntary testing and counselling, antiretroviral therapy, and infant feeding support. The expanded PMTCT package includes additional services which target both HIV-positive and HIV-negative mothers. These additional services include the provision of contraception and fertility services, as well as the involvement of men in decision-making (Pattinson, Etsane & Snyman 2007:9).

1.2 BACKGROUND INFORMATION ABOUT THE RESEARCH PROBLEM

Geographically, the North West Province (NWP) is mostly constituted by farming and mining areas. The Bojanala Health District is one of the NWP's four districts, and is

situated in the eastern part of the province. This particular district is bordered by Gauteng Province in the south, Mpumalanga Province in the east, and Limpopo Province in the north. Bojanala Health District consists of five sub-districts, namely: Kgetleng, Madibeng, Moretele, Moses Kotane, and Rustenburg. Figure 1.1 below illustrates the geographic location of Madibeng sub-district in the broader context of the Bojanala Health District.



Figure 1.1 Map of Bojanala showing Madibeng

(<http://www.localgovernment.co.za/locals/view/188/Madibeng-Local-Municipality>)

The Madibeng and Kgetleng areas are predominantly populated by farming communities. Both Moses Kotane and Moretele are conspicuous by their vast rural areas which are characterised by their very poor road infrastructure. On the other hand, the Madibeng sub-district has one district hospital, three health centres, seventeen day clinics that operate five days per week, five mobile clinics, and four clinics that operate on a twenty four hour basis. The health care facilities in the Bojanala Health District do render Primary Health Care (PHC) services, including PMTCT programmes (Department of Health, North West Province-Bojanala Platinum District Profile [s.a.]).

Whereas South Africa is often cited as the most developed country in Sub-Saharan Africa, the country's population still faces major health challenges. HIV and AIDS in South Africa accounts for the largest rate of infection, and maternal mortality at 410 per 100,000 live births has almost doubled since 1990 (Kiger 2011:1). South Africa has the biggest and most high profile HIV epidemic with over 400,000 new HIV infections that occurred in 2012. This resulted in South Africa being ranked first in HIV incidence in the world, says Human Sciences Research Council (HSRC) survey of 2012. An estimated 6.4 million (12,2%) South Africans were living with HIV and 240 000 dying from AIDS-related illnesses (Shisana, Rehle, Simbayi, Zuma, Jooste, Zungu, Labadarios & Onoya 2014:35).

The statistical data accruing from the 22nd National Ante-natal Sentinel HIV and Syphilis Prevalence Survey of 2011 revealed among others, that: from a sample of 36,000 women attending 1,445 antenatal clinics across all nine provinces, an estimated 29,5% of pregnant women aged between 15 and 49 years were living with HIV in 2011. From the same study, the North-West Province was among the provinces with the highest prevalence at 30,2% and followed Free State at 32,5%, Mpumalanga at 36,7% and KwaZulu-Natal at 37,4% (Department of Health South Africa 2012:1).

According to the recently released Department of Health (DOH) data, as revised by the Presidential Emergency Plan for AIDS Relief (PEPFAR 2014:1), the North-West Province recorded an antenatal HIV prevalence of 30,2% (95% Confidence Intervals (CI): 28-32,4). However, the provincial prevalence remained relatively stable from 2009 to 2011, with the Bojanala Health District recording a 4,6% increase in antenatal HIV prevalence to 37,0% (29,3%-33,9%) (2011 National Antenatal Sentinel HIV & Syphilis Prevalence Survey in South Africa, NDOH 2011 cited in PEPFAR in North West 2014:1).

1.3 STATEMENT OF THE RESEARCH PROBLEM

The research problem was identified by the researcher whilst working in Bojanala Health District as a Health Care Worker. Cases to which the researcher attended served as the primary means of establishing the precise problems and challenges encountered by the affected communities.

HIV-positive pregnant women have to travel a distance to the mobile health points to receive their antenatal treatment. The travelling distance between the mobile health points and the district hospital which is accredited as an ARV providing site is approximately 170 km. This means that HIV-positive pregnant women have to pay for transport to access the accredited ARV providing site. It was this reality that conscientised the researcher to the experiences and challenges of HIV-positive pregnant women in remote rural, farming and mining areas in respect of receiving PMTCT programme services.

The history of PMTCT research in South Africa indicates challenges experienced and periods of breakthroughs achieved. Major studies on antiretroviral drug interventions and programme implementation have been conducted by South African researchers and have contributed knowledge that has been utilised in the formulation of international guidelines. In spite of these remarkable strides, government responses to PMTCT research have generally been ambiguous and dismissive on occasions (Chopra, Daviaud, Pattison, Fonn & Lawn 2009:757). The Bojanala Health District was selected for this study as there are no known studies having been conducted previously on the availability and accessibility of the PMTCT programme in this particular district of the North West Province. Notwithstanding PMTCT availability in the district, the situation is acutely having problems because of the fact that very little is known about the extent of availability and accessibility of the programme to HIV-positive pregnant women.

Central to the research problem is the question, *how available and accessible is the PMTCT programme in the Bojanala Health District?* For two consecutive years (2012-2013), there has been an increase in HIV prevalence amongst antenatal women aged between 15 and 49 years in Bojanala Health District (Department of Health 2014:1). Similar findings were observed in studies elsewhere in South Africa where women did not receive adequate PMTCT services due to “health systems failure” (Nkonki, Doherty, Hill, Chopra, Schaay & Kendall 2007:27; Peltzer, Mosala, Shisana, Nqueko & Mngqundaniso 2007:57-66); including missed opportunities for HIV testing, receipt of the test results, and access to nevirapine. Other health system failures reported by the above authors were: shortages of supplies and consent forms, lack of counsellor availability, and health staff offering incorrect information (that is, knowledge dissemination that was not well understood by the local population (Magaso 2011:41).

1.4 RESEARCH PURPOSE

The purpose of the study is to determine the availability and accessibility of the PMTCT programme in the Bojanala Health District of the North West Province, the rationale being to develop strategies to facilitate such availability and accessibility of the PMTCT programme to HIV-positive pregnant women in the area specifically.

1.4.1 Research objectives

In conjunction with the study's purpose, the more specific intentions (objectives) of the current study are to:

- Explore and describe the experiences of HIV-positive pregnant women in the Bojanala Health District in respect of the availability and accessibility of the PMTCT programme.
- Explore and describe the experiences of Health Care Workers with regard to the availability and accessibility of the PMTCT programme in the Bojanala Health District.
- Develop and describe the conceptual framework for facilitation of the availability and accessibility of the PMTCT programme.
- Develop strategies to facilitate the availability and accessibility of the PMTCT programme and formulate recommendations for the Bojanala Health District.
- Validate the developed strategies based on the conceptual framework.

1.4.2 Overall research questions

The overall research questions in the current study are:

- How available and accessible is the PMTCT programme in Bojanala Health District of the North West Province?
- What strategies can be developed to facilitate the availability and accessibility of the PMTCT programme in Bojanala Health District of the North West Province?

Below are the specific research questions:

1.4.3 Specific research questions

- What are the experiences of HIV-positive pregnant women with regards to the availability and accessibility of the PMTCT programme in Bojanala Health District?
- What are the experiences of Health Care Workers with regards to the availability and accessibility of the PMTCT programme in Bojanala Health District?
- How should strategies be developed to facilitate the availability and accessibility of the PMTCT programme in the Bojanala Health District?
- How should strategies based on the conceptual framework be validated?

1.5 SIGNIFICANCE OF THE STUDY

The significance of the study relates to its practical relevance to society's socio-economic development; its scientific contribution to a specific field of study; as well as its contribution to an institution's (in this case, UNISA) research profile. Strategies will be developed based on the conceptual framework and on the findings of the study in order to facilitate the availability and accessibility of an effective PMTCT programme and improve the current programme in Madibeng Health sub-district of Bojanala Health District. Little has been documented with regards to the availability and accessibility of an effective PMTCT programme in the District. It is envisaged that the proposed outcomes of the study also contribute to the already existing knowledge in the District and improvements in quality of life for the pregnant women with HIV.

Development of strategies for facilitation of the availability and accessibility of the PMTCT programme can assist to strengthen and sustain effective PMTCT programme across the Madibeng Health sub-district. The results of the study can assist in policy making or changing and inform policy makers to address challenges related to availability and accessibility of the PMTCT programme.

1.6 DEFINITIONS OF TERMS

Various sources and subject books were consulted and reviewed in order to describe and understand the terms “Strategies”, “Facilitate”, “Availability”, “Accessibility”, and “PMTCT programme”. The following concepts have been identified and are described in order to get an interpretation of their theoretical and operational meanings and to allow consistency in the way the terms are used and understood in this study (Brink, Van der Walt & Van Rensburg 2010:25). According to Grove, Burns and Gray (2013:156), concepts in qualitative studies are usually more abstract and broadly defined than the variables in quantitative, outcomes, and intervention studies. Many researchers believe that the concepts in qualitative studies do not have operational definitions because sensitising or experiencing the real-life situations is more important to operationalising the concepts.

PMTCT: is defined as a clinical approach for the prevention of HIV transmission from an infected mother to her child. PMTCT is meant to protect and meet the needs of women and infants throughout, and beyond the maternal period (WHO 2010:12). In this study, PMTCT refers to a comprehensive programme intended to prevent mother-to-child transmission of HIV, including integration and linkages to maternal, new-born and child health; reproductive and sexual health; HIV testing and counselling; HIV care, treatment and support services, and health system strengthening.

Accessibility: the term accessibility is generally used to express the level to which a service, product, device or environment is obtainable to as many individuals as possible. Accessibility also refers to the ability to access and gain from some entity or service (www.ask.com/questions). In this study, it means the extent to which PMTCT programme is provided and used by the HIV-positive pregnant women in all the clinics or health care facilities of the health sub-district.

Availability: a wide coverage and integration of existing public health systems, with services provided by all antenatal and delivery clinics (WHO 2013:1). In the context of this study, it implies high-quality PMTCT services that are provided in all of the country’s public facilities by the Maternal and Child Health/Family Planning System. The most frequently identified issues pertaining to availability are staff, time, resources and

location. In addition to staff, PMTCT programmes require availability of family planning services, HIV test kits, preventive drugs, and sundries.

Other issues pertaining to availability include the type and range of services available, as well as the operating hours of the health facility. In the context of this study, availability means delivery of PMTCT programme resources that are conducive to offering a range of services that include: HIV counselling and testing; anti-retroviral prophylaxis; maternal care ante-partum during labour, delivery and post-partum; family planning services; treatment of sexually transmitted illnesses (STIs) and continuity of HIV care and treatment (UNICEF, UNAIDS & WHO 2008:1).

Facilitate: the action of allowing or assisting a process to happen while facilitation is the action of assisting the process to take place or the implementation to materialise (Shikongo 2008:37). Van Dyk (2012:161) further defines “facilitate” as a means to help people to discover how much they know, in order to enable them to explore their own potential; to build upon their experience; and to generate their own further learning. In the context of this study, “facilitate” is defined in the context of assisting the Health Care Workers to make use of the PMTCT programme in order to render its services to the HIV-positive pregnant women.

Health Care Workers: service providers or staff working at the Madibeng Health sub-district, which includes medical doctors; professional nurses; pharmacist assistants; Mother, Child and Women’s Health (MCWH) coordinators; facilitators; lay counsellors; and Mother-to-Mother (M2M) mentors.

Health district: an area of a region (mainly through its PHC clinics which are responsible for preparing implementation plans for the PMTCT programme’s availability and accessibility in accordance with the provincial plan (National HIV Counselling and Testing Policy Guidelines 2010:89). In this study, “health district” refers to the Bojanala Health District of the North West Province, South Africa.

Health sub-district: the Madibeng Health sub-districts and its health care facilities providing PMTCT programme services.

HIV-positive pregnant women: pregnant women who tested-HIV-positive and enrolled on the PMTCT programme at the different clinics or health care facilities of the Madibeng Health sub-district.

Programme: a highly integrated set of resources and activities designed to provide services to specific clients (McNamara 2008:12). Ivancerich and Matteson (2002:528) further define a programme as a system with inputs, processes, outputs and outcomes, with ongoing feedback among these inter-related parts. In this study, “programme” means actions taken by Health Care Workers in rendering the PMTCT programme services to the HIV-positive pregnant women.

Province: a geographically defined territorial entity functioning as an administrative division within a country or state (WorldStateman.org). In the context of this study, “province” refers to the North West Province, one of the nine provinces of the Republic of South Africa.

Strategies: actual skills and activities that are undertaken to perform actions, or the plans devised by top managers and their corporate advisers, where there are matters of policy that precede actions (Shikongo 2008:37).

1.7 THEORETICAL FOUNDATIONS OF THE STUDY

1.7.1 Research paradigm

A paradigm is described as a way of looking at natural phenomena that encompass a set of philosophical assumptions in order to guide a particular approach to an enquiry (Polit & Beck 2012:736). This research is situated in a naturalistic research paradigm, which emphasises that reality is multiple, subjective and context bound (Polit & Beck 2012:12). The research paradigm in this study premised on the pure, generic qualitative tradition. Little was known about the experiences of both HIV-positive pregnant women and Health Care Workers in the context of the availability and accessibility of the PMTCT programme in the Bojanala Health District. Consequently, the researcher embarked on a qualitative approach in order to afford participants the opportunity to describe their experiences concerning the PMTCT programme’s availability and accessibility.

A qualitative paradigm seeks to assist the researcher to describe and understand events, actions and processes in the natural context in which they occur (Creswell 2009:195). Such a paradigm provided a clear set of concepts, principles, and rules for carrying out the research (Ulin, Robinson & Tolley 2005:12). Research studies are largely based on specific paradigms and establishing boundaries for scientific inquiry; the paradigms themselves are also influenced by values of the researcher. Therefore, a qualitative paradigm was applied in order to understand the experiences of the participants with regard to availability and accessibility of the PMTCT in the Bojanala Health District.

1.7.2 Theoretical framework

In this qualitative study, two conceptual frameworks were used subsequent to the data analysis process. The Quality Health Outcome Model (QHOM) propounded by Mitchel, Ferketich and Jennings (1998:44) and the Survey List propounded by Dickoff, James and Wiedenbach (1968:468) were opted for due to their complementarity of familiarity which provided a basis for the development and description of the strategies. The QHOM approach consists of the interdependence between system, interventions, clients and outcomes, and was well applied in guiding the development of strategies to facilitate the availability and accessibility of the PMTCT programme. The above-cited approach by Dickoff et al (1968:468) consists of the concepts agent, context, procedures, receiver, purpose, and dynamics; and was also applied in conjunction with the QHOM approach.

Radwin and Fawcett (2002:356) describe QHOM as a new conceptual model of nursing that provides a distinctive intellectual context for nursing as a discipline. The model was developed within a socio-historical context of considerable interest in the explicit identification of the outcomes of nursing interventions as a way of advancing nursing science. The theoretical analysis of the QHOM revealed that it has a special relevance for the advancement of nursing science within the totality paradigm Parse (1987) and the reciprocal interaction worldview (Fawcett 1993:12).

In order to facilitate and improve PMTCT programme's availability to and accessibility by HIV-positive pregnant women at health sub-district level, the conceptual framework

was developed based on the Survey List model by Dickoff et al (1968), cited in Nicoll (1992:479). Furthermore, the conceptual framework provided a basis for development, guidance, explanation and application of the strategies.

1.8 RESEARCH DESIGN AND METHOD

Research methods refer to the techniques researchers use to structure a study and to gather and analyse information that is pertinent to the research question (Polit & Beck 2012:15). The study assumed a qualitative, exploratory, descriptive, and contextual design paradigm in order to gain better understanding of the experiences of the HIV-positive pregnant women and those of the Health Care Workers participants who were interviewed during the data collection phase.

1.8.1 Qualitative research

Grove et al (2013:23) describe qualitative research as “a systematic subjective approach used to describe life experiences and situations to give them meaning”. This type of research is conducted to explore, describe, and promote understanding of human experiences, events, and cultures over time. The researcher utilised the qualitative approach to gain better understanding of the participants’ experiences regarding the availability and accessibility of the PMTCT programme at the Madibeng Health sub-district.

1.8.2 Exploratory research

Polit and Beck (2012:18) state that exploratory research is used to investigate the full nature of a phenomenon and other related factors, as well as the manner in which it is manifested. Furthermore, exploratory research is conducted in order to increase the researcher’s knowledge of a phenomenon and provides valuable information for further investigations, while also asking the “how” questions (Babbie 2008:97; Polit & Beck 2012:18). The current study asks the question, *how available and accessible is the PMTCT programme*. Grove et al (2013:370) add that exploratory research is conducted “to gain new insights, discover new ideas and/or increase knowledge of phenomenon”. During the data collection phase, the researcher attempted to gather new information and gain insight by exploring the experiences of both the HIV-positive pregnant women

and the Health Care Workers with regard to the availability and accessibility of the PMTCT programme.

1.8.3 Descriptive research

Descriptive research presents a picture of the specific details of a situation, social setting or relationship, and also focuses on the “how” and “why” questions (Kreuger & Neuman 2006:23). The researcher conducted the study descriptively as well, for the purpose of accurately portraying the participants’ experiences with regard to the availability and accessibility of the PMTCT programme. The approach was used to generate new knowledge about topics on which limited or no research has been conducted (Grove et al 2013:692). Data has been presented in descriptive terms, mainly in the exact words of the participants. The experiences of the participants were described in order to obtain a detailed picture of the extent of the problem and to contribute to the body of knowledge in this important area of public health (Joubert 2007:78).

1.8.4 Contextual research

The research strategy in this study is contextual in nature (Mouton 2001:55). The researcher sought to understand the experiences of the research participants with regard to the availability and accessibility of the PMTCT programme. Babbie and Mouton (2001:272) refer to the contextual research method as understanding the events within the concrete and natural context in which they occur. Contextualisation was achieved as the study was solely devoted to understanding the experiences of the participants with regard to the availability and accessibility of the PMTCT programme at the Madibeng Health sub-district.

This study was conducted in three phases. Phase 1 focused on the exploration and description of the participants’ experiences with regards to the availability and accessibility of the PMTCT programme. Phase 2 focused on the development of the conceptual frameworks based on the results of Phase 1; while Phase 3 focused on the development of strategies to facilitate and improve the availability and accessibility of the PMTCT programme.

1.8.5 Phase 1: The exploration and description of the participants' experiences with regards to the availability and accessibility of the PMTCT programme

Phase 1 of this study will be described in terms of research setting, population, sampling criteria, data collection and data analysis.

1.8.5.1 Research setting

The study was conducted at Madibeng, a sub-district of Bojanala Health District. Three clusters were selected because they were the health centres and the fixed and mobile clinics were attached to them. The three clusters are: Bapong (B), Ikhutseng (I) and Jericho (J). Another important factor influencing their selection was that the clusters were situated in the mining, farming and rural sites where there were many HIV-positive pregnant women and more Health Care Workers deployed there. In addition, these clusters offered PMTCT programme services.

1.8.5.2 Population

A population is a set of persons or objects that possess some common characteristics that are of interest to the researcher (Brink et al 2010:206). The target population in this study consisted of HIV-positive pregnant women and Health Care Professionals in the Madibeng Health sub-district. The accessible population included the medical doctors, professional nurses, MCWH coordinators, M2M mentors, and the HIV-positive pregnant women who were on the PMTCT programme. The members were selected as participants on the basis that they were considered to possess common characteristics that were representative of a wider population (Gray 2005:404).

1.8.5.3 Sampling criteria

According to Grove, Burns and Gray (2013:365, 705), purposive sampling is a judgemental or selective method that involves conscious selection by the researcher of certain subjects or elements to include in a study. A criterion purposive sampling was used to select both the HIV-positive pregnant women and Health Care Workers. Participants were selected on the basis of their fulfilment of the inclusion criteria and

their willingness to share their experiences. The researcher consciously selected ten (10) HIV-positive pregnant women and twenty-one (21) Health Care Workers who indicated that they had experiences of the phenomenon under study. The criteria for inclusion are discussed in detail in Chapter 3.

1.8.5.4 Data collection

Data collection will follow the phases of the study. This study is conducted in three phases: Phase 1 relates to the exploration and description of the experiences of HIV-positive pregnant women with regards to the availability and accessibility of the PMTCT programme, and the exploration and description of the experiences of Health Care Workers rendering PMTCT programme services in the Bojanala Health District. Phase 2 relates to the development of the conceptual framework to facilitate the availability and accessibility of the PMTCT programme in the Bojanala Health District. Phase 3 relates to the development of strategies to facilitate and improve the PMTCT programme availability and accessibility in the Bojanala Health District. The pre-test study was conducted in the same context to investigate the feasibility of the study and to detect possible flaws in the questions on interview guides. Interview guides and probing questions were used for both the HIV-positive pregnant women and the Health Care Workers. The data collection process is described in more detail below.

1.8.5.4.1 Semi-structured individual interviews (IDIs)

Semi-structured IDIs were conducted with the HIV-positive pregnant women about their experiences of the availability and accessibility of the PMTCT programme in the Madibeng Health sub-district. The interviews were conducted in Setswana; the predominant language of Bojanala. The researcher, who is herself a midwife and public health officer, with knowledge of local vernacular, conducted the interviews. Each audio recorded interview lasted between 30 and 60 minutes. Data were collected until saturation was reached after the tenth participant was interviewed and the third FGD was conducted. During the interviews, the researcher utilised communication techniques such as probing, reflecting, clarifying, summarising, active listening and minimal verbal responses in order to encourage participants to provide more information on the research topic.

1.8.5.4.2 Focus group discussions (FGDs)

Three FGDs were conducted with six to eight Health Care Workers. According to Botma, Greef, Mulaudzi and Wright (2010:211), six to eight participants are enough to generate a discussion and sharing of knowledge on the research topic. Each FGD lasted between 30 and 60 minutes. Lunch hours were utilised for the FGDs in order to accommodate the required number of participants. Data was collected until the discussions in focus groups reached saturation and repetitive themes emerged.

1.8.5.4.3 Field notes

Conducting the FGDs and the semi-structured IDIs while simultaneously taking field notes was a demanding task. It was therefore imperative that the researcher utilised a research assistant who assisted in jotting down the field notes in order to describe the setting, participants' actions, as well as the researcher's own ideas and concerns.

1.8.5.5 Data analysis

Qualitative data analysis is described as the non-numerical examination and interpretation of observations, for the purpose of discovering underlying meanings and patterns of relations (Babbie 2007:378). All audio recorded FGDs and semi-structured IDIs were transcribed verbatim. The Setswana data and transcripts of the HIV-positive pregnant women were analysed in Setswana and then translated into English. The English data and transcripts of the Health Care Workers were analysed in English. The analysis was performed concurrently with data collection. The transcribed verbatim data were translated after the themes and categories were formulated by means of open coding. Data analysis, organisation and interpretation were derived from Tesch's descriptive method and its characteristic eight steps (Creswell 2009:186).

Literature control was conducted in order to present results of similar studies, to relate the present study to the on-going dialogue in the literature, as well as to provide a framework for comparing results of this study with those of other studies (Creswell 2003:46). This approach is discussed in greater detail in Chapter 4.

1.8.6 Phase 2: Development of a conceptual framework to facilitate the availability and accessibility of the PMTCT programme

A conceptual framework was developed based on the results of Phase 1. Because this study was a qualitative study, the conceptual framework was developed after the data was analysed and integrated within the QHOM and Dickoff, James and Wiedenbach's survey list. Analysis, evaluation and recommendation were used to guide in the development of the conceptual framework. This conceptual framework was selected for this study because the hallmark of a PMTCT programme was to demonstrate a unique body of knowledge.

1.8.7 Phase 3: Development of strategies to facilitate the availability and accessibility of the PMTCT programme

The strategies will be developed and described in order to facilitate and improve the PMTCT programme in the Bojanala Health District. Information obtained from the semi-structured IDIs, FGDs and conceptual framework was combined to develop the strategies to facilitate and improve the availability and accessibility of the PMTCT programme.

1.9 SCOPE OF THE STUDY

The research was limited to experiences of both HIV-positive pregnant women enrolled in PMTCT programme and Health Care Workers who had worked in PMTCT programme. The study was also about the PMTCT programme's availability and accessibility and was limited to the Madibeng Health sub-district. Therefore, the sample may not be representative and the findings could not be generalised to the whole of Madibeng Health sub-district or Bojanala Health District.

1.10 MEASURES TO ENSURE TRUSTWORTHINESS

Trustworthiness is described as the degree of confidence qualitative researchers have in their data, assessed the criteria of credibility, transferability, dependability and confirmability (Polit & Beck 2012:745). Below is a brief description of the criteria, this will be fully discussed in Chapter 3.

1.10.1 Credibility

According to Polit and Beck (2008:546), credibility addresses confidence in the truth of the data and is analogous to internal validity in quantitative studies. This relates to the researcher's effort to establish truth of the findings in the study. The strategies of credibility include prolonged engagement, persistent observation, triangulation, member checking, peer debriefing and structural coherence.

1.10.2 Transferability

Transferability is defined by Streubert and Carpenter (2011:455) as a term used in qualitative research to demonstrate the probability that the research findings have meaning to others in similar situations. Transferability is also called fittingness.

In this study, transferability was enhanced through triangulation which involved the use of multiple sources or referents to draw conclusions about what constituted the truth (Polit & Beck 2008:196). The aspects of enhancing transferability include dense description and sampling of participants.

1.10.3 Dependability

This is a criterion used to measure trustworthiness in qualitative research. Dependability is met through securing credibility of the findings (Streubert & Carpenter 2011:453). Here the researcher asked herself whether the research process was logical, well documented and audited. In this study, the researcher accounted for changing conditions in the phenomenon chosen for study as well as changes in the design created by an increasingly refined understanding of the setting (De Vos, Strydom, Fouche & Delport 2011:419). Triangulation of data collection methods was used to ensure that the findings are dependable. Co-coding was done manually by the researcher and an expert in qualitative research. The strategies of dependability include dense description of the research methodology, audit trail, code-recode procedure, triangulation and peer examination.

1.10.4 Confirmability

Confirmability captures the traditional concept of objectivity. It is concerned with establishing that the data represent the information provided by the participants, and not biases of the researcher (De Vos et al 2011:421). The questions were reviewed by the researcher and the supervisors before being asked to participants. The transcriptions of the interviews and the FGDs were also checked against the original recordings. The strategies of confirmability include triangulation, peer examination, reflexivity and audit trail.

Strategies and applicability of the measures of trustworthiness will be fully described in Chapter 3.

1.11 ETHICAL CONSIDERATIONS

Ethical considerations in research refer to a system of moral values that is concerned with the degree to which research procedures adhere to professional, legal and social obligations to the study participants (Polit & Beck 2012:727). To ensure that ethical issues were adhered to, the following areas were critically considered:

1.11.1 Protecting the rights of the institutions

The research proposal was submitted to the Ethics Committee of the Department of Health Studies at the University of South Africa, for ethical approval to ensure that the rights of participants were considered (see Appendix C). A written letter of approval to collect data was obtained from the North West Province Department of Health, Research Directorate before the actual data were collected (see Appendix B). Written letter of permission to collect data was also obtained from the Sub-district manager of the three clusters (B, I and J) at Madibeng Health sub-district before the data were collected (see Appendix J). In addition, permission to conduct the interviews and the FGDs was also obtained from the operational managers of the three clusters.

1.11.2 Principle of respect for autonomy of persons

This principle involves the autonomy and confidentiality of the individuals for participating in research. The researcher treated the prospective participants as autonomous agents by informing them about the proposed study and allowed them to voluntary choose to participate or not (Grove et al 2013:164). The interviews and FGDs times and preferences were considered, and the HIV-positive pregnant women and the Health Care Workers were assured that the information will not be linked to their names.

The ethical issues considered so as to protect the HIV-positive pregnant women and the Health Care Workers involved in the study included:

1.11.3 Principle of beneficence

This is a fundamental ethical principle that seeks to maximise benefits for study participants and prevent harm (Polit & Beck 2012:720). In this study, the researcher ensured the principle of beneficence by ensuring an environment that was conducive to interviews and the FGDs. The researcher conducted the interviews and the FGDs in private rooms where disturbances were minimal. Honesty and openness were considered which promoted rapport between the researcher and the participants. In order to cater for participants' wishes, the interviewer conducted the interviews with the HIV-positive pregnant women in Setswana and the FGDs with the Health Care Workers in English. If the interviews and the FGDs proved to be too distressing to the participants, they were to be abandoned. The participants were informed of their rights to withdraw from the study at any time, even after data gathering had commenced, without fear of being victimised.

1.11.4 Principle of justice

This is an ethical principle that states that human subjects should be treated fairly (Grove et al 2013:698). Regarding identification of the participants, participation in the study was voluntary and withdrawal before the completion of the interview and FGD being possible without repercussion for potential participants. The researcher selected the participants fairly through the assistance of the operational managers and also according to the research plan. The research results of this study will be communicated

to the Sub-district and the research report will be published. The researcher developed the strategies based on the findings of the study and the conceptual framework, which will facilitate and improve the availability and accessibility of the PMTCT programme.

1.11.5 Researcher integrity

The researcher upheld the confidentiality of the participants involved in the interviews and the FGDs, keeping their anonymity and privacy secured. The study was designed in such a way that risks of breaking confidentiality were minimised (Streubert & Carpenter 2011:63). In this study, the researcher conducted the interviews in local language (Setswana) with the HIV-positive pregnant women and the FGDs in (English) with the Health Care Workers in order to minimise the threats to trustworthiness. Furthermore, the researcher adhered to high level of technical standards, indicated the limitations of the study and its methodology, and the data analysis methods that were employed.

- **Informed consent**

Participants of both the interviews and the FGDs were properly briefed on the purpose of the study and its implications. In this way, they were in a position to make an informed decision on whether or not to participate. The consent forms were designed and shared with the participants (see Appendices D and G). Each respondent's signed informed consent was obtained before the interview and FGD commenced. The participants involved in this study did so voluntarily and were advised in writing that they could withdraw from the study at any time. In this study, their decision to participate or terminate was respected. Participation or non participation in the study had no influence on the participants' care and employment. There were no direct benefits for participation in the study.

- **Anonymity**

The study participants were entitled to their anonymity. Permission to use direct quotes was acquired and examples of raw data did not reveal participants' identities. The identities of participants were protected by using codes such as (for HIV-positive pregnant women: BP1 to BP5, IP1 to IP2 and JP1 to JP3). B, I and J were the first

letters of the three clusters and P was for Participant. On the other hand, (the Health Care Workers were referred to as: BHCW1 to BHCW7, IHCW1 to IHCW8 and JHCW1 to JHCW7) instead of names when transcribing the data from the digital voice recorder and the transcripts. The coding of data ensured no direct link between individual participants and their responses. The researcher was granted permission to record the interviews and the FGDs after a thorough explanation of the reasons for recording.

- **Confidentiality**

In ensuring confidentiality, the informed consent form did not request participants' names. Codes were assigned to identify the participants. Only the researcher and the research assistant had the information that linked participants' codes to their identities. To ensure confidentiality, all the field notes, digital voice recordings, interviews and FGDs data were kept under lock and key. The participants were informed that a copy of the research report could be requested from the researcher should they wish to do so.

- **Privacy**

The interviews were conducted in the private rooms of the three clinics. Private rooms were offered in order to maintain privacy and avoid disturbances during the interviews and the FGDs. The information was locked up. To ensure privacy of the participants, the names of the participants were not mentioned in the final report.

1.12 STRUCTURE OF THE THESIS

The chapters in the study have been organised as follows:

CHAPTER 1: Orientation to the study

CHAPTER 2: Overview of the PMTCT programme in South Africa

CHAPTER 3: Research design and methodology

CHAPTER 4: Discussion of findings and literature control

- CHAPTER 5: A conceptual framework for the facilitation of PMTCT programme strategies
- CHAPTER 6: Strategies for facilitation of the availability and accessibility of the PMTCT programme for HIV-positive pregnant women
- CHAPTER 7: Conclusions and recommendations

1.13 CONCLUSION

This chapter outlined the study in respect of: the reasons the study was undertaken, the problem statement, the research questions, the purpose and objectives of the study, as well as the paradigmatic perspectives on which the study was based. The research design and methodology, ethical considerations and methods to ensure trustworthiness were also briefly discussed. All these will be further explicated in Chapter 3. The next chapter (Chapter 2) presents a brief description overview of the PMTCT programme in South Africa.

CHAPTER 2

OVERVIEW OF THE PMTCT PROGRAMME IN SOUTH AFRICA

2.1 INTRODUCTION

The Madibeng Health sub-district – also known as Brits – is divided into three sections known as Cluster B, Cluster I, and Cluster J. The Madibeng Health sub-district also has one district hospital, three health centres; seventeen five-day clinics; two twenty-four hour clinics; and five mobile clinics. These health care facilities offer PHC services, including the PMTCT programme. Furthermore, the sub-district was selected as a research site for this study on the strength of the findings of the 2009 South African National Antenatal Survey which showed that from the 52 health districts in South Africa, the Madibeng sub-district recorded the highest HIV prevalence rate, and was the only district that has shown an increase in HIV prevalence in 2009 – from 31,8% to 34,9%. This 2009 record excludeds five health districts in KwaZulu-Natal, two health districts in Gauteng, and two other health districts in the Free State (Department of Health 2010:1).

At any given time, the above-cited health clusters had a maximum permanent staff capacity, with a minimum of one assistant manager (PHC). In the absence of the assistant manager (PHC), a trained PHC operational manager was appointed to manage the cluster and act on behalf of the assistant manager (PHC). The common denominator of the selected clusters were that these facilities had maternity units, and were regarded as large facilities also providing treatment and care to HIV-positive pregnant women from within the clusters.

2.2 PERSPECTIVES OF THE PMTCT PROGRAMME'S AVAILABILITY AND ACCESSIBILITY

South Africa has been implementing the PMTCT programme since 2001. Currently, about 29% of pregnant women are HIV-positive. That is one reason accounting for the HCT campaign being escalated, as women were more vulnerable to HIV infection than

men. Already, the campaign is empowering people with knowledge concerning their health status. Most people (92%) are now aware that all pregnant women should be tested for HIV (Ijumba, Doherty, Jackson, Tomlinson, Sanders & Persson 2013:761). In March 2013, clinical guidelines and recommendations were updated for a standardised triple-drug regimen to treat HIV-infected women with CD4 count less than 350 during pregnancy and breastfeeding, with continuation of ART after breastfeeding (NDoH 2013:1).

According to a 2010 survey, only 20% of HIV-positive women were breastfeeding, 62% were formula feeding, and 18% practised high-risk mixed feeding, suggesting the need for increased attention to infant feeding. The MTCT rate at eighteen months could thus be considerably higher than the rate at eight weeks (Goga, Dinh & Jackson 2012:1). Furthermore, the 2012 National Communication Survey reported that more than 95% of pregnant women were HIV-tested. The South African National AIDS Council (SANAC), the Department of Health, other government departments, non-governmental organisations (NGOs), the private sector, labour unions, as well as traditional and faith-based leaders have collectively encouraged South Africans to take action and be aware of their status (Health Sites-HCT/MMC Clinics 2014:1).

The MTCT rate at eight weeks gestation has dramatically decreased to about 2,6% in 2011 and 2,7% in 2012, which is below the 7,5% reduction rates. The testing of pregnant women has reached 100%, while treatment of HIV-positive women is around 90%, still below the target of 100%. Early Infant Diagnosis (EID) has improved, but only 63,3% of children are tested, and only 54,4% of eligible children are on treatment. The success of the PMTCT programme could also be observed in the decrease in infant and under five mortality rates, as well as in the 3,1% decrease of HIV prevalence among children aged two to fourteen years of age. The benefits of preventing peri-partum transmission need to be supported by efforts to prevent transmission from breastfeeding (Republic of South Africa 2013:1).

2.2.1 Purpose of the PMTCT programme

The PMTCT programme in South Africa aims to ensure:

- Primary prevention of HIV, especially among women of child-bearing age.

- Integration of PMTCT interventions with basic antenatal care, sexual and reproductive health.
- Child and Adolescent Health, Comprehensive Care Management Treatment (CCMT) and TB services.
- Strengthening post-natal care for the mother-child pair.
- Provision of an expanded package of PMTCT services, integrating PMTCT into continuum of care and management of the woman's and child's health from pregnancy through delivery, postnatal care and beyond. PMTCT details recommendations on feeding practices with emphasis on exclusive breastfeeding (National Department of Health [South Africa] 2014:1).

2.2.2 The Impact of HIV Infection on maternal deaths

According to a study conducted by Chweneagae, Delis-Jarrosay, Farina, Fawcus, Gondi, Khaole, Kunene, Mhlanga, Mbambisa, Mbombo, Molele, Moodley, Moran, Pattison, Rout, Schoon and Seabe (2012:1), South Africa was found to have the largest population living with HIV infection from 2008 to 2010; which demonstrates the impact of HIV on maternal deaths in the country. HIV infection is the most important condition contributing to maternal death in South Africa. For the past seven years, the prevalence of HIV infection has been approximately 30% among women attending antenatal care in the public sector. HIV-positive women are more likely to die of any underlying cause than HIV-negative women, with non-pregnancy-related infections (NPRIs) being the most common contributory condition.

Barron, Pillay, Doherty, Sherman, Jackson, Bhardwaj, Robinson and Goga (2012:1) argue that the magnitude of the problem of HIV infection showed the rise of the pandemic since 1990 and its stabilisation after 2004. In 2010, 30,2% of all pregnant women who attended public sector health-care facilities were infected. The prevalence of HIV among pregnant women is likely to remain high for at least the next two decades, as the number of people receiving life-long ART in South Africa is still increasing and is predicted to plateau at around 3 million in 2016 (Johnson 2012:22).

2.2.3 The PMTCT programme's efficacy in reducing HIV and AIDS in children

According to the South African government's 2013 Mid-Term Review of the 2011 United Nations General Assembly Declaration on HIV and AIDS, the country's effective PMTCT programme has led to an 80% drop in the number of new infections among children aged 0 to 14 years (from 822,000 in 2005 to an estimated 21,000 in 2012). In addition, improvements in early infant diagnosis and implementation of the exclusive breastfeeding policy have resulted in the rate of MTCT dropping from 3,5% to 2,7% between 2010 and 2011. The number of infants needing ART has dropped from 26,000 in 2009 to 17,000 in 2012. The Mid-term Review aims at eliminating new HIV infections among children and the substantial reduction of AIDS-related maternal deaths by 2015. The Mid-Term Review also prioritises the integration of the AIDS response in health and development efforts (Ilfia Labantwana 2014:1).

According to the afore-cited Mid-Term Review, the estimated HIV prevalence among the general population in 2012 was 17, 9%. The number of adults living with HIV in 2012 was 6,1 million. Between 2009 and 2012, the number of new infections declined by 22% and is expected to continue declining. Very encouragingly, there has been a decrease in new infections among young women aged 15 to 24 years. The latter decreased from 870,000 in 2005 to 710,000 in 2012. However, this age group still represents the majority of the population living with HIV. Women aged 15 years and older constitute more than 50% of the adult population living with HIV, totalling a massive 3.4 million. There has been a substantial reduction in AIDS mortality since 2010, from 350,000 deaths to 240,000 in 2012 (Ilfia Labantwana 2014:1).

2.2.4 The efficacy of antiretroviral treatment for the PMTCT of HIV

South Africa has significantly improved its PMTCT and EID programme since 2008. By 2010, PMTCT was offered at 9% of the health facilities in the country (Republic of South Africa 2012:1). On 1 April 2010, new clinical guidelines for PMTCT were implemented, indicating that pregnant women should be initiated onto a PMTCT regimen from 14 weeks instead of 24 weeks, HAART for all pregnant women with CD4 counts less than or equal to 350, and infant nevirapine prophylaxis for six weeks (if the mother is on HAART or not breastfeeding) or throughout the breastfeeding period (NDoH 2010d:1). These guidelines were updated in March 2013 and recommendations made for a

standardised triple-drug regimen to treat HIV-infected pregnant women (regardless of CD4 count) during pregnancy and breastfeeding, with continuation of ART after breastfeeding for women with CD4 count less than 350 (NDoH 2013f:1).

The percentage of HIV-positive pregnant women receiving ARVs to reduce the risk of MTCT was reported to be 83% in 2009, 87, 35% in 2010, and 87, 1% in 2011 (Republic of South Africa 2012:1). The PMTCT survey indicated that in 2010, 91, 7% of women received ARV treatment or prophylaxis (Goga et al 2012:1). The antenatal client initiated on HAART rate was reported to be 64,1% in 2011/12 and 75,4% in 2011/12 according to manual calculations using the Health Data Advisory and Co-ordination Committee (HDACC) method (NDoH 2012:1). A target of 100% was set for both ART and prophylaxis in the APP for 2011/12 (NDoH 2011c:1).

2.2.5 Achievements and strengths of the PMTCT programme's availability accessibility

Grimwood, Fatti, Mothibi, Eley and Jackson (2012:2), assert that PMTCT programme outcomes improved substantially at the PHC health facilities in South Africa during the period in which new PMTCT guidelines were implemented at sites receiving support from nurse quality mentors (QMs) and community-based adherence supporters. Substantial reductions in early PCR and 18-month HIV test positivity rates were encouraging, compared with previous outcomes in resource limited settings. The high rates of HIV testing, antiretroviral treatment and prophylaxis uptake, and an almost two-fold increase of the 32-week gestation HIV retest rate indicated a strengthening of the healthcare system.

PMTCT and HCT have fared well and there is a demonstrated reduction in MTCT and an increase in the number and proportion of people who are aware of their HIV status. The MTCT rate at six weeks gestation has been significantly reduced to a national coverage of 2,7%. PMTCT targets have mostly been achieved. The roll out of the new 2013 guidelines has been significantly successful. Increased coverage of ART for pregnant women has resulted in a substantial reduction in PCR positivity of infants at six weeks. Some facilities reported no PCR positivity for more than one year. Integration of PMTCT with HIV/TB/MCH services is being implemented accordingly. HIV-positive pregnant women are systematically screened for TB in the health facilities. For

monitoring and evaluation purposes, a performance dashboard is utilised by some facilities for programme improvement and staff implementation of the new national guidelines (National Department of Health [South Africa] 2014:5).

Bhardwaj, Barron, Pillay, Treger-Slavin, Robinson, Goga and Sherman (2014:239) elucidate that there was remarkable improvement across all key indicators in the PMTCT cascade over the three year period (2011-2013) on the elimination of MTCT of HIV in South Africa: Rapid scale-up involved the adherence to quality improvement. Simple monitoring tools such as a visual dashboard and action reports data were successfully used to improve the performance of the PMTCT programme across South Africa. Since then, MTCT has shown a significant downward trend.

The above findings are consistent with the findings of a study conducted by Strengthening South Africa's Response to HIV and Health on PMTCT of HIV (SARRAH). The study findings revealed that improvements in the PMTCT rate have been sustainable. By January 2014, the estimated PMTCT rate had fallen to 2.5% (SARRAH 2014:1). Furthermore, the UNICEF-supported MOM Connect in South Africa generates pregnancy and health related messages that are sent to pregnant women's mobile phones via SMS. Reminder messages are sent to women when they are due for a check-up at their local clinic (UNICEF South Africa 2013:3).

2.2.6 Challenges, constraints and recommendations of the PMTCT programme's availability and accessibility

According to in-depth interviews in the study conducted by Sprague, Chersich and Black (2011:1) on health system weaknesses and constrained access to the PMTCT programme and maternal HIV services in South Africa, considerable weakness within operational HIV service delivery were identified. These weaknesses manifested as missed opportunities for HIV testing in antenatal care due to shortages of test kits; insufficient staff assigned to HIV services; late payment of lay counsellors, with consequent absenteeism; and delayed transcription of CD4 cell count results into patients files (required for ART initiation). By contrast, individual factors undermining access encompassed psycho-social concerns, such as fear of positive test result or a partner's reaction; as well as stigmatisation. Data and information systems for monitoring in the health care facilities were markedly inadequate.

Grimwood et al (2012:2) assert that many challenges to South African PMTCT programmes remain. Pregnant women need to book earlier, and facilities should accommodate them without turning them away for later appointments. Women may seroconvert during late pregnancy or breastfeeding, potentially resulting in vertical transmission. Retesting of HIV-negative women through their antenatal phase to the end of breastfeeding is required. This may be done through community outreach by community care workers, and could include testing of household members. CD4 cell testing of mothers and early PCR testing in infants need to be increased, which may be facilitated by point of care CD4 and PCR technology. Difficulties in follow-up of mothers and children, mixed feeding and stigmatised exclusive feeding remain as some of the existing challenges.

A broad range of data across the PMTCT spectrum is lacking, and the MTCT rate at 18 months is not well known. Follow up ante-natal and post-partum of the mother-child pair is sub-optimal and retention in care presents a challenge. Tools such as registers and tally sheets are not aligned to the new guidelines, leading to difficulties in monitoring policy changes. There is a low couple year protection rate (CYPR), and the dire need for training and mentorship is exacerbated by a low child ART initiation rate. All Health Care Workers should be trained in family planning, which should be well integrated into the PMTCT programme. Nurses trained in Nurse Initiated Management of Antiretroviral Therapy (NIMART) often do not feel confident to initiate infants, which highlights the need for mentorship and strengthening of IMCI (National Department of Health [South Africa] 2014:6).

Grimwood et al (2012:2) corroborate the view that improved data collection systems for accurate routine reporting, and further health systems implementation research are needed as health services strive toward reaching UNAIDS' vision of zero HIV transmission and HIV-related maternal mortality by 2015. In order to achieve this vision, however, adult HIV prevention efforts with routine HIV counselling and testing continue to be imperative.

Sprague et al (2011:9) explain further that the following should be recommended for PMTCT and maternal HIV services improvement in South Africa: ensuring autonomy over resources at lower levels; linking performance management to facility-wide human

resources interventions; developing accountability systems; improving HIV services in labour wards; ensuring quality HIV and infant feeding counselling; and improved monitoring for performance management using robust systems for data collection and utilisation. It is also feasible to implement district-level, data-driven-quality improvement processes at a national scale to improve the performance of the PMTCT programme at the local level (Bhardwaj et al 2014:239).

Awareness and use of data for planning and quality improvement (QI) actions need to be strengthened to meet targets at facility level. Although there is universal access to PCR, specimen rejection rates are unacceptably high in some facilities. There is a lack of focused programmes to reach adolescents and young people. Adolescent-friendly services are limited because they are not well understood by the Health Care Workers. Late booking for antenatal care, and even presenting for the first time during labour, remains a problem. This is due to Health Care Workers sending back women who present early pregnancy, as well as cultural beliefs discouraging the visiting of health facilities until 16 weeks gestation period (National Department of Health [South Africa] 2014:6).

The continued harmful behaviour among young men and women poses a persistent challenge in respect of PMTCT availability and accessibility. The development and implementation of a well-resourced prevention plan targeting the drivers of risky conduct is required. There is an overwhelming need for a national communication and advocacy strategy focusing on social bottlenecks and public awareness programmes. Unplanned pregnancies and inherent health systems challenges inhibit early antenatal care visits (within the first 20 weeks), which delays the date of diagnosis and treatment for pregnant women and their infants. The latter requires improved integration of MTCT in the maternal and child health programmes and improving overall mother and child health services to include family planning and social support services. The implementation of an infant feeding policy requires close monitoring and evaluation. Issues of stigma and disclosure need on-going attention to address demand constraints. Food and nutrition services have been neglected as part of the country's integrated response. The infant feeding policy should be considered as a matter of urgency and implemented as part of a comprehensive package (Ilifa Labantwana 2014:2).

2.3 SOUTH AFRICA'S NEW HIGHLY EFFECTIVE PMTCT PROGRAMME GUIDELINES

In the last 14 years, South Africa has shown great progress in the implementation of the PMTCT programme. This success is largely attributable to improvements in the availability of anti-retroviral drug choices, as well as the widespread accessibility to the PMTCT programme. With the latest guidelines implemented as of April 2013, it is now realised that the country has reached a point of almost complete eradication of paediatric HIV becoming a reality. Women are now able to receive highly effective treatment as soon as they enter the programme at any clinic throughout the country. Breastfeeding is also encouraged as anti-retroviral drugs will assist in the prevention of HIV transmission with the infant receiving all the well-known benefits of breast milk. The programme goes beyond the ante-natal and delivery period to include post-natal care by providing appropriate treatment, care, and support to women living with HIV, their children and their families (Coovadia & Pienaar 2013:1).

Coovadia and Pienaar (2013:1-2) illuminate that the involvement of the partner in HIV testing and availability to provide care during the pregnancy is also encouraged. Counselling on safe infant feeding practices are available to all new mothers and infants who receive Nevirapine (NVP) daily for six weeks for protection against infection. This six-week programme is called "infant prophylaxis". These infants are followed-up in care and infant HIV testing is carried out at the immunisation clinics at six weeks of age. With all these changes, it is envisaged that the utilisation rate and the effectiveness of this health programme will be enhanced to provide true holistic ante-natal and post-natal care for all women.

2.4 INTEGRATION OF THE PMTCT PROGRAMME AND MATERNAL NEONATAL CHILD WOMEN HEALTH (MNCWH) SERVICES

South Africa has developed an action framework titled, "No Child Born with HIV by 2015 and Improving the Health and Wellbeing of Mothers, Partners and Babies in South Africa". The framework strives at all levels to achieve coverage, access, quality and availability of services including PMTCT, MCWH, integrated management of childhood illnesses (IMCI), expanded programme on immunisation (EPI), nutrition, HCT, ART, care and support, early childhood development, school health, youth services, child

support and social services, HIV prevention, and family planning services. The framework was tailored to district needs, and aims to identify and address bottlenecks at operational management level in order to allow for continuous improvement. A small number of 15 key MNCH indicator dashboards are used to monitor integration and track progress on a quarterly basis through the data for action reports at national, provincial and district levels (Department of Health [South Africa] 2011:1; Bhardwaj 2012:1 cited in National Department of Health [South Africa] 2014:1).

The Centre for Integrated Health Programmes (CIHP) provides an enhanced package of MCH services to HIV-positive pregnant women by means of the integration of reproductive health into all PMTCT services. The latter is achieved by means of the capacity building of care providers on syndrome management of Sexually Transmitted Infections (STIs) and the provision of HIV counselling and testing (HCT) at family planning (FP) clinics. The enhanced package of MCH services also focuses on enhancing the health and development of young people, while supporting the active participation and inclusion of their spouses (Centre for Integrated Health Programme 2014:2).

According to the report results of evaluation of systems for early infant diagnosis (EID) in PHC facilities in South Africa, health personnel providing immunisation services in 72% of sampled facilities believe that offering EID during routine immunisation visits is feasible. Of these, 76% actually provide infant testing at immunisation service points, but only 10% implement routine global EID. By contrast, while 77% of nurses offering sick child health care or IMCI services accept the importance of infant testing, only 31% of them believed that it is feasible to provide infant HIV testing services at IMCI/child health service delivery points. Reasons for not supporting routine global EID at IMCI/child health service delivery points include: staff shortages, time constraints, and high workload volumes. Despite these challenges, the integration of the PMTCT programme into MNCWH services has also received increased prioritisation (Woldesenbet, Goga & Jackson 2012:x).

2.5 THE NORTH WEST PROVINCE'S (NWP'S) EXPERIENCES OF THE PMTCT PROGRAMME

As part of South Africa's nine provinces, the North West Province's experiences of the PMTCT programme are discussed below.

2.5.1 Achievements and strengths of the PMTCT programme's availability and accessibility in the North West Province

HIV counselling and testing is offered to most ante natal clinic patients. Many counsellors also provide pre-ART and ART counselling. Some follow HIV-positive clients from HCT, CD4, pre-ART, ART enrolment, and long-term adherence. ELISA testing is conducted at the same time as CD4 testing. No stock-outs of male condoms are prevalent, but some stock-outs of female condoms were reported. Condoms are available at the gates of some health facilities in order for young people to access them. PMTCT programme interventions of labour, delivery and post-natal care are acceptable. There is also a satisfactory integration of MNCWH, EPI, TB, PCRs, ART and FP (Population Council 2014:7).

Quality improvement initiatives and usage of data for action reports to track progress for the elimination of MTCT (eMTCT) are in use, which is cogent evidence of the new National Department of Health's ART guideline implementation (ART initiation, fixed-dose combination); access to treatment for eligible adults and paediatric patients; as well as NIMART coverage in at least 60% of the observed facilities. No stock-outs of ARVs were reported. Some of the maladies being practised include: systematic task shifting from doctors to nurses, from pharmacists to post-basic pharmacists, and from nurses to counsellors and community health workers (CHWs). On the other hand, positive staff attitudes are maintained towards people living with HIV (PLHIV), and a programme of the youth to access sexual reproductive health services (SRH) is also maintained. Satisfactory turnaround time (TAT) for laboratory and courier services work well. CD4 and other baseline investigations are received in less than two weeks. Horizontal integration (i.e., providing different services within one facility) is optimally functional. For vertical integration, up-referrals to hospitals are generally functional. Integrated drug procurement, supply and laboratories are well established (Population Council 2014:7).

With the view to improving the PMTCT programme at Letlhabile Community Centre in the Madibeng sub-district, the team (which had participated in the Leadership Development Programme (LDP) decided that they needed to increase polymerase chain (PCR) testing at the clinic to 80% within six months. In partnership with their stakeholders, the team's mission was premised on providing an effective and efficient PMTCT programme (Management Sciences for Health 2014:1).

In addition to increasing PCR testing at six weeks, the Madibeng-sub-district team developed a comprehensive PMTCT register. This register consolidated information collected across different registers, such as the "blood book" the former Pellargon (formula milk) register, HIV testing for mothers and PCR tests for infants. A mother is now treated from early pregnancy and recorded in the register. She is then allocated a unique reference number that is used for appointment booking, blood results, counselling, delivery, drugs and other health needs. The mother and child are monitored in this register from early pregnancy to nine months post-delivery. The Madibeng sub-district team recommends that the PMTCT register be implemented at all health care facilities in the North West province (Management Sciences for Health 2014:2).

2.5.2 Challenges, constraints and recommendations of the PMTCT programme's availability and accessibility

While PMTCT success rates were reported, challenges and constraints were also recorded. Amongst others, it was reported that HIV testing was performed by counsellors, while no quality assurance programmes were prevalent. Furthermore, no standard operating procedures (SOPs), job aids, timers, uniforms and name tags were observed. There is inadequate support supervision or routine refresher training in some of the provincial health care facilities. In addition, no training existed on the filling-in of registers, and some dilapidated forms were lying scattered in some health care facilities. There is inadequate emphasis on HIV prevention within facilities, and couples HCT was rare. There is almost no recorded condom distribution to HCT clients, with one counsellor giving 10 condoms in 14 months. There is a glaring knowledge gap in the implementation of some aspects of new ART policies and guidelines by Health Care Workers, especially patient monitoring-viral load, CD4 counts and side effects. There is

inconsistent documentation in ART clinical stationery, incomplete data in the registers. There are data quality issues (Pre-ART, ART registers) and inconsistent pre-ART linkage to care in different facilities (Population Council 2014:8).

With regards to pharmaco-vigilance, there is a lack of knowledge on the reporting of adverse drug reactions, and no case report form (CRF) in some facilities. There is a degree of paucity in Human Resources (HR) and other inadequate supervision time to cover PMTCT. Some facility workers require more active supervision. There is also insufficient HR for Community Health Centres (CHCs) to stay open for 24 hours and a need for more data capturers. Insufficient space, including for drug storage, is still a problem. Drugs under desks, on the floor, and in non-air-conditioned closets are also a problem looming large. At Primary Health Centres (PHCs) and CHCs, there is longer waiting times (2+hours) than at hospitals. Wellness clinics, even for repeat visits, focused only on picking drugs. Often, there is no fast-tracking of chronic disease clients. CHWs are not well linked to defaulter lists and tracking of defaulters (Population Council 2014:8).

HCT should provide routine quality assurance (QA), support supervision, and routine proficiency tests for all counsellors. The continuation of ELISA testing for all HIV-positive clients and the use of results for QA should be practiced. More couples should be encouraged to undergo counselling and testing. Training should be emphasised in the usage of printed and stoppage improvised registers. Provision of timers, job aids, name tags, vests and other uniform should be available. Refresher training in testing of HIV prevention for all counsellors should be undertaken, prior to launching of new campaigns. Furthermore, there should be documentation of condom distribution to all PMTCT//MNCWH/HCT/ART patients (Population Council 2014:7).

Priority should be given to the provision of mobile clinics at convenient locations and times, with staff who are well-trained and respectful to clients. Regular refresher workshops/mentoring should be conducted for those already trained on NIMART, in order to strengthen the case management and clinical monitoring of patients and the scaling up of the paediatric ART portfolio, as well as the improvement of documentation and record keeping on clinical stationery. Staff training on pharmaco-vigilance (surveillance and reporting of adverse drug reactions) should be accentuated. The promotion of data use for operational planning, on-going training, mentoring of data

capturers should include data capturers in data review meetings. Data quality assessment, validation, and data quality checks should be strengthened. Discussion and feedback on key indicators, screening, case detection, as well as regular display of treatment outcomes should be ensured in each facility and sub-district (Population Council 2014:7).

Data analysis should be ensured in quantifying coverage and identifying “missed” client opportunities. In an integrated environment, training is still important. However, the training itself relies more on quality supervision, including cross-supervision within a healthcare facility. The effective and efficient use of community health workers and care givers should be improved. There should also be a review of systems and resources should be made available for tracking back-referrals. In CHCs and PHCs, provision of drugs to chronic disease clients, including HIV-positive pregnant women, should be fast-tracked (Population Council 2014:7).

2.6 RESOURCES THAT AFFECT THE PMTCT PROGRAMME’S AVAILABILITY AND ACCESSIBILITY

On reviewing the relevant literature on the research topic, the following resources were found to have an immense impact on the availability and accessibility of the PMTCT programme.

2.6.1 Human resources

Nkonki, Doherty, Hill, Chopra, Schaay and Kendall (2007:27), cited in Doherty, Chopra, Nsibande and Mngoma (2009:2), motivate that in South Africa, anthropological research on missed opportunities for participation in PMTCT programmes has identified several health systems failures as contributing to the low uptake and non-availability of counsellors. South Africa has the potential to save a substantial number of mothers’ and children’s lives. Notwithstanding that there are some critical shortages of staff and resources, especially in the poorest rural areas such as this study’s research site (Madibeng Health sub-district), the challenge is to improve the quality and productivity of existing PMTCT programmes. The main aim of the PMTCT programme is to improve pregnant women’s quality of life by ensuring that they experience fewer HIV-related

illnesses. Staff shortages in health care facilities increased Health Care Workers' workload.

Health Care Workers were recognised towards the elimination of new paediatric infections (Department of Health, KwaZulu-Natal 2012:1). Their hard work has contributed to the decline of the MTCT rate for HIV since 2005 from 20, 9% to 2, 1% in 2011. The self-same MTCT rate for HIV rate was 2, 9% in 2010, and higher in previous years. In this regard, the goal of the awareness campaign, "Towards the Elimination of New HIV Infections Amongst Children and Keeping their Mothers Alive" was attainable.

2.6.2 Infrastructural resources

PMTCT programmes need to be effectively implemented in rural South African clinics. Such an approach would assist in the reduction of the number of HIV-infected children born to HIV-positive mothers (Chaparanganda 2012:14). The notion of knowing each country's maternal mortality reduction mechanisms is complicated by a huge diversity of country contexts and the very determinants of maternal mortality. Similarly, for example, observations made in clinics offering PMTCT programme services in an area of the Eastern Cape showed clearly the problems of lack of the necessary resources and the real difficulties of travelling to the clinics (Joubert & Ehrlich 2010:322). These problems included:

- Distance and transport problems in getting to the clinics
- Deficiencies in the health services
- Personal fears of the women and their families in relation to HIV/AIDS
- Some community and cultural restrictions on accessing the PMTCT programme services (Joubert & Ehrlich 2010:326)

2.6.3 Policy imperatives

South Africa has a national infant feeding policy that supports, protects and promotes exclusive breastfeeding. This policy is a life-saver, and is critical to the well-being of many infants nationally. However, in a study conducted by Ahmadu-Ali and Couper (2013:385) on the practice of exclusive breastfeeding among mothers attending a postnatal clinic in the rural Tswaing sub-district of the North West Province, it was found

that HIV-positive women were still at risk of transmitting HIV to their infants on account of sub-optimal PMTCT infant feeding methods.

Management at healthcare facilities has to re-orientate themselves in relevant social policies and organisational practices in order to support the Health Care Workers rendering services of the PMTCT programme. Workshops to facilitate the formulation of thinking on PMTCT and HIV/Aids and assistance in shaping programmatic interventions should be conducted. Furthermore, the multi-sectoral approach to PMTCT and HIV/Aids services should be practiced (Nxumalo 2014:33).

2.6.4 Institutionalisation of trainings

As is the case with HIV and Aids, STI and TB (HAST) trainings, the South African government provides trainings and workshops on PMTCT programmes, to non-governmental organisations (NGOs) that provide trainings for the Department of Health and other affiliated stakeholders. Health Care Workers need to be aware of new approaches to care and treatment. For instance, there are new treatment guidelines that were released by the NDOH in April 2010, and it is the duty of the Health Care Workers to be familiar with these new treatment protocols and regimen (Raphela 2011:25).

Rispel, Peltzer, Phaswana-Mafuya, Metcalf and Treger (2009:174) mention that the need for additional training of professional nurses and for a formal system to update staff on new or revised PMTCT programme guidelines should be addressed accordingly. In addition, the importance of lay counsellors receiving comprehensive training, role clarification, and supervisory support is also emphasised.

The current research significantly refers to the need for Health Care Workers to be trained and developed specifically in PMTCT in order that they develop their skills and knowledge accordingly. The Policy and Guidelines for the Implementation of the PMTCT Programme (South Africa 2008:70) emphasises that PMTCT training should be extant, as it is a key component in the implementation of the PMTCT programme (Khunou 2010:39).

According to Leon, Lewin and Mathews (2013:15), changing practice may be difficult to achieve in an environment characterised by nurses' low morale and high workloads. It has been observed in many low-and middle-income countries (LMICs), including South Africa, that high workloads and stress levels limit the potential of nurses to respond to the counselling needs of HIV-positive pregnant patients. *Ipsso facto*, nurses have called for more training and support to enable them to fulfil this role.

2.6.5 External stakeholder involvement

A study by Sewnunan (2013:1) attests that the poor acceptance of people living with HIV in the family and community was a major constraint that affected women's full utilisation of the PMTCT preventive strategies and their adherence to treatment. In exploring the home environment for psycho-social support that was available for women on the PMTCT programme in South Africa, as well as the influence the home environment had on compliance to the programme, the findings of the above study revealed the prevalence of common barriers such as stigma, discrimination, fear of social isolation and financial dependence.

2.6.6 The role of support groups

Khunou (2010:44) emphasised the importance of support groups for mothers utilising the PMTCT programme in the Rustenburg Sub-district. These support groups provide help to the HIV-positive pregnant women in the form of, amongst others, instilling independence, self-reliance, and sufficient skills to have their own food gardens; how to take treatment; abstention from alcohol; refraining from un-prescribed medication; stress alleviation; and staying away from witchdoctors.

2.7 CONCLUSION

This chapter presented and discussed a brief overview of the PMTCT programme in South Africa and North West Province. PMTCT was discussed in respect of its multi-faceted perspectives, its purposes, impact, guidelines, treatment, strengths, achievements, challenges, (un)availability of resources, as well as the associated constraints. In addition, recommendations from various sources and studies were also discussed in the context of South Africa and North West Province. In order to ensure a

successful programme for HIV-positive pregnant women and the full participation of Health Care Workers, it is almost sacrosanct that such a programme (PMTCT and MNCWH services) should be available, accessible, efficient, and be fully integrated into the larger healthcare system. The following chapter (Chapter 3) describes the research design and methodology in more detail.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

The rationale and logic relating to the utilisation of the qualitative data collection and analysis techniques is premised on its capacity and potential to afford the researcher the opportunity to be more interactive with the data generating process. Once set up (the qualitative process), the research proceeds more according to a predetermined plan (Bouma & Rod Ling 2010:166). For instance, in-depth interviewing allowed for the research subjects' un-impeded 'freedom' to relate their stories, their experiences, their perceptions and their true feelings to the researcher. However, a qualitative research allows more continuous reflection on the research, and there is usually more room for ongoing alteration as the research proceeds. In the context of this study, the research methodology relates to the more specific means employed to implement the desired outcomes of the study. Both the research design and research methodology were helpful in achieving the objectives and the evidence on which the findings and recommendations would be acted on.

3.2 RESEARCH PURPOSE

The purpose of this study is to determine the availability and accessibility of the PMTCT programme in the Bojanala Health District of the North West Province, the rationale being to develop strategies to facilitate such availability and accessibility of the PMTCT programme to HIV-positive pregnant women in the area specifically.

3.2.1 Research objectives

For purposes of integrating and aligning the research problem to the broad intentions of the study, the objectives (specific intentions) of the current study have been articulated as follows:

In conjunction with the study's purpose, the more specific intentions (objectives) of the current study are to:

- Explore and describe the experiences of HIV-positive pregnant women in the Bojanala Health District in respect of the availability and accessibility of the PMTCT programme.
- Explore and describe the experiences of Health Care Workers with regard to the availability and accessibility of the PMTCT programme in the Bojanala Health District.
- Develop and describe the conceptual framework for facilitation of the availability and accessibility of the PMTCT programme.
- Develop strategies to facilitate the availability and accessibility of the PMTCT programme and formulate recommendations for the Bojanala Health District.
- Validate the developed strategies based on the conceptual framework.

3.2.2 Overall research questions

The most pertinent research questions in the current study have been articulated thus:

- How available and accessible is the PMTCT programme in Bojanala Health District of the North West Province?
- What strategies can be developed to facilitate the availability and accessibility of the PMTCT programme in Bojanala Health District of the North West Province?

3.2.3 Specific research questions

In tandem with the overall research question above, the following specific research questions have an inextricable affinity with the more specific intentions of the study:

- What are the experiences of HIV-positive pregnant women with regards to the availability and accessibility of the PMTCT programme in Bojanala Health District?
- What are the experiences of Health Care Workers with regards to the availability and accessibility of the PMTCT programme in Bojanala Health District?

- How should strategies be developed to facilitate the availability and accessibility of the PMTCT programme in the Bojanala Health District?
- How should strategies based on the conceptual framework be validated?

3.3 RESEARCH DESIGN AND METHOD

The study assumes a qualitative, exploratory, descriptive, and contextual research design. All these research aspects were intended to enable the researcher gain better understanding of the participants' perspectives and experiences during the data collection phase. Research methods are techniques researchers used to structure the study and to gather and analyse information relevant to the research question (Polit & Beck 2012:12).

3.3.1 Qualitative research

A qualitative research paradigm seeks to assist the researcher to describe and understand events, actions and processes in a natural context in which they occur (Creswell 2009:195). Grove et al (2013:87) further indicates that the problems formulated for qualitative research identify an area of concern that requires investigation. The purpose of a qualitative research indicates the focus of the study – whether it is a subjective concept, an event, a phenomenon, experience, situation, or a facet of a culture or society (Marshall & Rossman 2011:45). In the context of this study, the researcher was a key instrument. The researcher collected data herself by conducting the interviews and the FGDs with the participants. The interview guides were just used for guidance and the research assistant recorded the interviews and the FGDs.

3.3.2 Exploratory research

An exploratory research design is often used in the context of limited knowledge and understanding on the subject being studied. During the data collection period, the researcher attempted to gather new information and gains insight into this subject by exploring the experiences of Health Care Workers and the experiences of HIV-positive pregnant women with regard to the availability and accessibility of the PMTCT programme (Polit & Beck 2012:18).

Consequently the exploratory component rather than observing and describing, goes further to investigate the full nature of the phenomenon, the manner which it occurs and related contributing factors and to determine if there are any interesting extremes in the data (Polit & Beck 2008:19, 20). Using the demographic data assisted in having more knowledge about the participants and getting more information which had an impact on the findings.

3.3.3 Descriptive research

An exploratory-descriptive qualitative researcher often indicates that a study is needed for a specific population, in order to understand the needs, the desired outcomes, or the views and appropriate interventions for the members of the particular group. The goal is to create a programme or an intervention to benefit the population. Exploratory-descriptive qualitative researchers identify a specific lack of knowledge that could be addressed only through seeking the viewpoints of the people most affected (Babbie 2008:97; Polit & Beck 2012:18). In the context of this study, a descriptive research assisted the researcher to obtain better understanding of the HIV-positive pregnant women's and Health Care Workers' experiences with regard to the availability and accessibility of the PMTCT programme.

3.3.4 Contextual research

The strategy of this research is contextual in nature (Mouton 2001:55). This orientation relates to the specific context of the Madibeng sub-district within the Bojanala Health District and its three clusters (Bapong, Ikhutseng and Jericho), from where the participants were recruited to participate in the study. Thus, the researcher aims to provide a description and exploration of the experiences of HIV-positive pregnant women and Health Care Workers with regard to the availability and accessibility of the PMTCT programme within this specific context.

3.3.5 Phase 1: Exploration and description of the experiences of both HIV-positive pregnant women and Health Care Workers with regards to the availability and accessibility of the PMTCT programme in Bojanala Health District

This phase is described in terms of the research setting, the research population and sampling criteria, data collection and data analysis.

3.3.5.1 Research setting

The research setting refers to the physical location and conditions under which the data collection takes place in the study (Polit & Beck 2012:49). This study was conducted in three clusters called Bapong, Ikhutseng and Jericho of Madibeng Health sub-district of Bojanala Health District in the North West Province. The choice of the sub-district was influenced by the fact that the clusters were situated in the mining, farming and rural sites where there were many HIV-positive pregnant women enrolled in the PMTCT programme. Another reason for choosing Madibeng Health sub-district was that the clinics are far apart from the farms, mines, other villages and even from the district hospital. Only few villages have clinics and most of the HIV-positive pregnant women depend on the five (5) mobile clinics that visit the mobile points almost once a month to render the PMTCT programme services.

3.3.5.2 Population

A research refers to the entire set (universe) of individuals or objects having some common characteristics that are of interest to the researcher (Polit & Beck 2012:738; Brink 2006:206; Grove et al 2013:44). In this study, the target population consisted of ten (10) HIV-positive pregnant women enrolled in the PMTCT programme and (21) Health Care Workers rendering PMTCT services at Madibeng Health sub-district.

3.3.5.3 Sample criteria

Purposive sampling was used for the study as it involved the conscious selection of certain subjects, elements, events or incidents (Polit & Beck 2008:343). Accordingly, participants were selected on the basis that the researcher considered them to be

typical of a wider population. HIV-positive pregnant women and Health Care Workers were purposively selected on the basis of their experiences about the availability and accessibility of the PMTCT programme in respect of the research setting. In general, the selection process of the participants was based on the researcher's personal judgement concerning who were the most representative and also most productive.

The researcher contacted the operational nurse managers of the three clusters to identify the HIV-positive pregnant women in their third trimesters who were enrolled in the PMTCT programme. The researcher went to the clinics on the days of the return dates of the HIV-positive pregnant women in their third trimesters. The researcher selected the HIV-positive pregnant women whom the Health Care Workers were done with their ANC follow-up check-ups prior leaving the clinics. The researcher was assisted by the Health Care Workers allocated for ANC to identify the HIV-positive pregnant women. The researcher only interviewed participants who were willing to take part in this study.

The researcher also contacted the operational nurse managers of the three clusters to act as mediators and provide the researcher with a list of the Health Care Workers who would be research participants. The researcher together with the operational nurse managers arranged appointments for the FGDs which were conducted during the second lunch times except for one which was conducted in the morning. The Health Care Workers were also selected by the researcher with the help of the three PMTCT programme operational nurse managers. The researcher selected the Health Care Workers based on their experiences with regard to availability and accessibility of the PMTCT programme. The researcher went to the clinics on the days whereby most of the Health Care Workers were working full day shifts. Rapport was build prior data collection.

The number of participants was also determined in accordance with the criterion of saturation of information. This is the point in the study according to which the researcher began to hear the same information repeatedly being reported and she no longer learned anything new (Babbie 2007:305). Ten (10) HIV-positive pregnant women were interviewed, while twenty one (21) Health Care Workers participated in the FGDs. These sample sizes were advantageous in that they allowed for every participant's

optimum involvement and maximum elicitation of responses. The criteria for inclusion are stated below.

Inclusion criteria for HIV-positive pregnant women

Only HIV-positive pregnant women fitting the following categories were selected for inclusion as participants:

- Those between 18 and 49 years of age.
- Those in their third trimester of pregnancy.
- Those enrolled in the PMTCT programme in the Madibeng Health sub-district.
- Those willing to participate in sharing their experiences about the availability and accessibility of the PMTCT programme.
- Those residing within the Bapong, Ikhutseng or Jericho clusters.
- Those who understood the language in which the interview is conducted (Setswana).
- Those who were regularly booked ante-natal clinic attendees; this was checked on ANC cards.

Inclusion criteria for Health Care Workers

Only Health Care Workers fitting the following categories were selected for inclusion as participants:

- Those working in the public health care facilities of Madibeng Health sub-district.
- Those having at least 2-3 years of working experience in the PMTCT programme.
- Those willing to participate in sharing their experiences about the availability and accessibility of the PMTCT programme.
- Those registered with a professional bodies-South African Nursing Council (SANC) and Health Professional Council of South Africa (HPCSA).

Sample size

The minimum sample sizes depended on the data collection method for the different steps in Phase 1 and data saturation. According to Polit and Beck (2012:521), there are no rules for sampling size in qualitative research. Data saturation guided the number of participants included in the study. Therefore, the sample size was determined by the saturation of information during data collection (Brink 2006:134) as the scope of the study was limited to the experiences of both the HIV-positive pregnant women and the Health Care Workers with regards to the availability and accessibility of the PMTCT programme.

3.3.5.4 Data collection

Data collection is the precise and systematic gathering of information relevant to a research problem using data collection instruments which could be in the form of questionnaires, interview schedules and guides, field notes and records and /or artefacts (Grove et al 2013:691). Data were collected using semi-structured individual interviews and the FGDs. The interviews were recorded with a digital voice recorder, and field notes were also recorded manually and transcribed. The central questions were asked and explored further by using the probing questions in the guides (see Appendices F and I). Informed consent was obtained from participants regarding their voluntary and audio-recorded participation in this study. The data collection method is discussed under the following headings: Semi-structured interviews, focus group discussions and field notes.

3.3.5.4.1 Semi-structured individual interviews (IDIs)

Semi-structured IDIs were conducted with the HIV-positive pregnant women regarding their experiences on the availability and accessibility of the PMTCT programme in the Madibeng sub-district. According to Botma et al (2010:208), semi-structured interviews are used to gain a detailed picture of a participant's beliefs, perceptions, or account of a particular topic. An interview guide with predetermined open-ended questions was used by the researcher to guide in the facilitation of the interviews. The interviews were conducted in Setswana, the predominant language in Bojanala. The researcher, who is herself a midwife and public health officer with a thorough knowledge of Setswana,

conducted the audio-recorded interviews; each lasted between 30 and 60 minutes. Data were collected to the point of saturation. The most perennial question asked to the HIV-positive pregnant women during semi-structured interviews was: “**Tell me about your experiences of the availability and accessibility of the PMTCT programme**”.

3.3.3.5.2 Focus group discussions (FGDs)

According to De Vos et al (2011:360), FGDs are group interviews. FGDs are also a means of better understanding people’s feelings or thoughts concerning an issue, product or service. Participants are selected because they have certain characteristics in common that relate to the topic of the focus group. The group is “focused” in that it involves some kind of collective activity. The researcher created an environment that encouraged participants to share perceptions, points of view, experiences, wishes and concerns without pressurising participants to vote or reach consensus in the focus group. The researcher guided the discussions, while a small group discussed the topics that the facilitator raised. In focus groups, the participants’ actual statements during the discussions constituted the essential data.

In this study, the focus groups were conducted with the Health Care Workers regarding their experiences in the context of their involvement in the rendering of PMTCT programme services. Each focus group lasted between 30 and 60 minutes. Lunch hours were utilised for the FGDs in order to accommodate the required number of participants. The central question asked was: “**Tell me about your experiences of the availability and accessibility of the PMTCT programme**”. Data was collected in the FGDs until the discussion reached saturation and repetitive themes emerged.

3.3.5.4.3 Field notes

Field notes are a short summary of observations made during data collection. Field notes are usually not restricted to any particular type of action or behaviour. Rather, they represent a narrative set of written notes intended to paint a picture of a social situation in a more general sense (LoBiondo-Wood & Haber 2010:272). Conducting the focus groups and semi-structured interviews, while also taking field notes at the same time was a challenging task. In order to lessen this challenge, the researcher utilised a field note taker or research assistant to take the field notes. A day-to-day report on the

real observations made was maintained in the form of field notes. According to De Vos et al (2011:335), the two practical rules for making field notes, namely: recording what we see as well as what we hear, and expanding field notes beyond immediate observations were adhered to by the researcher and the research assistant.

The researcher involved observation and recording as forms of field note taking whilst conducting FGDs and interviews. Unlike much ethnographic fieldwork, the discussions and interviews are not regarded as major research tools. Instead, the distinctive procedure is to observe and record naturally occurring talk and interaction (Silverman 2010:230). In order to make “deeper and more general sense of what is happening”, Silverman (2010:231) further suggests that observers keep separate set of notes. In this study, the researcher and field note taker/ research assistant kept two sets of notes namely: short notes made at the time; and expanded notes made as soon as possible after each field session.

The research assistant still took detailed field notes during FGDs sessions. After these group sessions, the facilitator also took notes as well. Both parties then discussed and compared their notes. It was important that this be done as soon as possible after the focus groups. In the focus groups themselves, the notes included the following: seating arrangements; the order in which participants speak, to aid voice recognition; non-verbal behaviours such as eye contact, posture, gestures between group members; striking themes; and highlighting as much of the conversation as possible (De Vos et al 2011:372).

3.4 DATA COLLECTION PROCESS

Data were personally collected by the researcher from two groups of participants, the HIV-positive pregnant women (Step 1) and the Health Care Workers (Step 2) of the three health clusters of Madibeng Sub-District by means of semi-structured IDIs and FGDs respectively. The research assistant recorded both the interviews and the discussions.

The researcher explained the purpose of the study to the participants, as well as the reasons for the selection of the clusters, the HIV-positive pregnant women, and the Health Care Workers. The interview with the HIV-positive pregnant women was

commenced with a welcoming statement in Setswana, translated into English as follows:

"Ke a go amogela ebole ke go leboga ka go nna teng mo poledisanong eno. Segolo se tona ke lebogela nako ya gago le matsapa a o a tsereng. Poledisano eno ke ka tumelano ya gago ya go ithaopa go tsaya karolo. O letlelesegile go ka bua mafoko a sekgoa fa go tlhokegang teng."

"Welcome and thank you for availing yourself for this interview session. I appreciate the time and effort you availed for this purpose. The interview will only take place after you have voluntarily agreed to participate and signed the consent form. You are allowed to express yourself in English, if you feel comfortable in this regard."

The Health Care Workers were *welcomed* as follows:

"Welcome and thank you for availing yourself to this focus group session. I appreciate the time and effort you made. I apologise in advance that we need to do this interview in English for the sake of reporting the results to a broader South African audience. If you feel like throwing in a Setswana/Vernacular word here and there for clarity that is still acceptable."

One central question was asked for both groups of participants. Probing questions then followed in relation to the responses from the participants. The probing questions were included in the interview guides as well. During the interviews, the HIV-positive pregnant women were identified as BP1 to BP5, IP1 to IP2, and JP1 to JP3. B, I and J are the first letters of the three clusters, and P is the abbreviated form of Participant. During the FGDs, the Health Care Workers were referred to as (BHCW1 to BHCW7, IHCW1 to IHCW8, and JHCW1 to JHCW7). Once more, B, I and J are the first letters of the clusters, and HCW is abbreviation for Health Care Worker. The digital voice records were identified by the dates on which the interviews and the discussions were done rather than the names of the clusters. Data from the digital voice recorder were transcribed verbatim after the researcher had completed the IDIs and the FGDs.

3.4.1 The researcher's field experiences

At Cluster B, the FGDs were scheduled in the mornings due to the tight schedules of some Health Care Workers. The Operational Manager reported that they did not have enough lunch time due to the above-optimal activities of the health facility. At I and J clusters, the FGDs were conducted during lunch time. Some Health Care Workers in the very same cluster (silent participants) were reluctant to participate. They had a facility meeting prior to the arrival of the researcher and the environment was somewhat tense. They were reserved and kept a low profile while other willing participants took part in the proceedings. It took the researcher's reassurance that no names, dates and time were to be mentioned in narrating the experiences; which consequently infused a modicum of acceptability by these 'silent participants'. Since the researcher was a former employee of the sub-district, the emphasis on the purpose of the research brought acceptance of her presence.

Appointments with HIV-positive pregnant women were mostly on days scheduled for their ANC services, which had very long queues and caused the researcher often finding herself having to wait for an hour to interview a patient. The researcher brought some refreshments for the patients, but this was not for purposes of inducing their participation. Rather, it was meant to ease their hunger and thirst concerns, since they had been at the facilities for long period of time. These patients were eager to tell their stories and relieved that a health professional was finally listening to their utmost concerns. At the end of the interview, one participant remarked that she hoped the information she had given would be used to improve the availability and accessibility of the PMTCT programme.

3.4.2 Data analysis

The purpose of data analysis, regardless of the type of data or underlying research tradition, is to organise, to provide structure, and to elicit meaning from the data (Polit & Beck 2010:463). Based on its capacity to enhance the study's objectives and the categories of enquiry, Tesch's descriptive method of data analysis, organisation, and interpretation cited in Creswell (2009:186), was used to analyse the predominantly qualitative data in this study. Literature control was conducted in order to present results of similar studies, to relate the present study to the on-going dialogue in the literature,

and to provide a framework for comparing results of the current study with other studies (Creswell 2003:46).

All audio-recorded FGDs and semi-structured IDIs were transcribed verbatim. Data collected from the HIV-positive pregnant women were analysed in the original language in which they were collected and then translated to English. Data collected from the Health Care Workers were collected and analysed in English. The data analysis was performed concurrently with data collection. Open coding data was also employed in this study to reinforce the data analysis process. The eight steps propounded by Tesch's descriptive method were followed incorporated in the following data analysis sequence:

- The researcher read all the transcripts carefully in order to establish a sense of the contents.
- The researcher re-read the script on top of the pile, and continuously re-focused on its contents.
- The above process was repeated with all the other transcripts, with the researcher writing down all the substantive thoughts entailed in the scripts. Emerging topics and themes were then clustered into themes, categories, and sub-categories.
- Codes were allocated to similar topics. This coding exercise was repeated with all the transcripts.
- As themes, categories and sub-categories were developed, the researcher established the most descriptive wording for the topics.
- Appropriate abbreviations for each of the above were finalised. The data in each category were grouped. The data were also checked to see if re-coding was necessary. The data analysis process was then finalised (Creswell 2009:186).
- The researcher analysed the transcriptions by reading the scripts repeatedly in order to seek and derive appropriate meaning from the data, which were then grouped into themes, categories and sub-categories.

3.4.3 Phase 2: Development of the conceptual framework to facilitate the availability and accessibility of the PMTCT programme

A conceptual framework is a set of related ideas derived from the research design. It may be a simple list of concepts and possible associations, or a more elaborate schematic diagram of key influences, presumed relationships, and possible outcomes of the research problem (Ulin, Robinson & Tolley 2005:36). The conceptual framework per se refers to a structure of concepts and/or theories arranged together as a map for the study (LoBiondo-Wood & Haber 2010:575). Reed and Lawrence (2008:422), further define a conceptual framework (synonymous with model) as a set of concepts and those assumptions that integrate them into a meaningful configuration.

The QHOM in conjunction with the Dickoff, James and Wiedenbach's survey list were utilised to develop the conceptual framework based on the results of Phase 1. The concepts of both the model and the survey list assisted the researcher to derive a conceptual framework in order to develop the strategies to facilitate the availability and accessibility of the PMTCT programme.

3.4.4 Phase 3: Development and validation of strategies to facilitate and improve the availability and accessibility of the PMTCT programme in the Bojanala Health District

In this third phase of data analysis, strategies were developed and described in order to improve the existing PMTCT programme in the Bojanala Health District. Information obtained from the semi-structured, in-depth individual interviews with HIV-positive pregnant women, and from the focus group discussions with the Health Care Workers were combined with the conceptual framework in order to develop the relevant strategies to facilitate and improve the availability and accessibility of the PMTCT programme in the Bojanala Health District. The validation of strategies will be discussed in detail in Chapter 6.

3.5 PRE-TEST STUDY

A pre-test study as a small-scale trial of a research was conducted before the actual study. The two interview guides were developed for the study (see Appendices F and I).

The researcher with the assistance of two research supervisors developed the interview guides. The suitability of the interview guides was established by means of a pre-test study, which was aimed to prove that the questions were comprehensive and elicited the response from the participants. The researcher conducted a pre-test study a week prior to conducting the main study. Semi-structured IDIs were conducted with two HIV-positive pregnant women aged between 18 and 49 years, and one FGD with about 6 to 8 Health Care Workers aged between 21 and 60 years and working in the public health care facilities of Madibeng Health sub-district.

During the pre-test study, the researcher identified the need to re-phrase the 'grand tour' questions, and to re-sequence biographical questions (see Appendices E and H). The researcher gained valuable experience in the fieldwork, and could determine the time required to prepare and complete the interviews and FGDs. Consequently, the pre-test study enhanced the trustworthiness of the findings, and also helped the researcher to use appropriate facilitative techniques during the interviews and FGDs. The research study accurately represented the experiences of the study participants (Streubert & Carpenter 2011:455).

3.6 MEASURES TO ENSURE TRUSTWORTHINESS

The process of data verification was carried out according to Guba's model of trustworthiness, cited in Graneheim and Lundman (2004:109). For purposes of ensuring the thoroughness and trustworthiness of the qualitative data, the following steps advocated by Lincoln and Guba (1985) were adopted, namely: credibility, transferability, dependability, and confirmability.

3.6.1 Credibility

Credibility is a term that relates to the trustworthiness of findings in a qualitative research study. Credibility is demonstrated when participants recognise the reported research findings as their own experiences (Streubert & Carpenter 2011:453). The credibility of this research was ensured by means of implementing the following strategies prolonged engagement, persistent observation, triangulation, member checks, and peer debriefing as well as structural coherence. In this study credibility was enhanced by means of the following aspects:

- **Prolonged engagement**

According to Polit and Beck (2012:739), prolonged engagement refers to the investment of sufficient time collecting data in order to obtain an in-depth understanding of the culture, language, or views of the group being studied, and to test for misinformation and distortions. Polit and Beck (2004:430, 728) mention that prolonged engagement is a first and very important step in qualitative research. In the context of the province and health district where the study was conducted, the researcher's background was ideally and conveniently suited to the research milieu and its attendant prolonged engagement during data collection. The researcher invested sufficient time for collection of data in order to have in-depth understanding of the people under study, to test for misinformation and distortions, and to ensure saturation of key categories (Polit & Beck 2012:589).

Prolonged engagement was also essential for building trust and rapport with participants, which in turn made it more likely that rich, accurate information be obtained. The researcher ensured that she had adequate time and resources to stay engaged in fieldwork for a sufficient long period. The researcher conducted the study whilst on a two months leave with enough stationery, two digital recorders and spare batteries. A week prior to the interviews and the FGDs, the researcher telephonically contacted the cluster-based participants to establish rapport and to make appointment requests. Each interview lasted for approximately between 30 and 60 minutes and was audio recorded; the same applied to each FGD.

During the interviews and the FGDs, the participants used the languages of their choice, which was intelligible to the researcher. Such an arrangement was conducive to the facilitation of the discussions, and was also useful in obviating such barriers as misinformation and distortion of data. Prolonged engagement was essential and advantageous for building trust and rapport between the researcher and the participants. Reciprocally, the collection of accurate, useful and rich information on PMTCT programme availability and accessibility was facilitated, which was useful in the establishment of the study's credibility. All of the above served as a strategy to enhance the nuance of prolonged engagement.

- **Persistent observation**

According to Polit and Beck (2012:589), persistent observation refers to the researcher's focus on the characteristics or aspects of a situation or a conversation that are relevant to the phenomena being studied. To ensure persistent observation, the researcher was in constant collaboration with the Madibeng sub-district; therefore, the participants had access to the researcher if there was anything they wanted even after the main interviews and FGDs. The researcher included the participants from the selected three clusters of the sub-district. This was achieved by diligent recording of face- to-face interactions with participants and digital-recording sessions. The research process was supervised and discussed continuously with the supervisors.

- **Triangulation**

Polit and Beck (2012:745) refer to triangulation as "the use of multiple methods to collect and interpret data, so as to converge on an accurate representation of reality". In this study, triangulation was achieved by means of the use of FGDs with the Health Care Workers and usage of individual interviews with the HIV-positive pregnant women. Data were collected by means of a digital voice recorder with participants to obtain in-depth information concerning their PMTCT programme experiences. Field notes were also used by the researcher. Field notes are notes recorded about the people, places, and things that are part of the ethnographer's study of a culture (Streubert & Carpenter 2011:453). Polit and Beck (2012:548) maintain that field notes represent the participant observer's efforts to record information and also to synthesise and understand data. The following types of field notes were utilised by the researcher:

Observational notes are objective descriptions of observed events and conversations, information about actions, dialogue and context are recorded as completely and objectively as possible (Polit & Beck 2012:548). For this study, observation notes which provided objective description of the setting, events, behaviour and conversations as well as information pertaining to time, place, activity and dialogue were recorded as completely as possible. These notes were taken in order to give an account of what happened where, when and how to record it while still fresh in the mind of the researcher (De Vos et al 2011:316).

Methodological notes are reflections about observational strategies. They can also provide instructions or reminders about how subsequent observations will be made (Polit & Beck 2012:549). These notes were made to provide instructions or reminders to the researcher about how subsequent data collection and observations were made and possible actions were undertaken.

Theoretical notes are notes that document researcher's thoughts about how to make sense of what is going on (Polit & Beck 2012:549). The researcher attempted to attain meaning to observations made while in the field. This served as a starting point for subsequent analysis.

Personal notes are comments about researcher's own feelings in the field (Polit & Beck 2012:549). These notes were taken to describe the researcher's reactions, reflections and experiences during the interviews and the FGDs, and were used to provide insight into the experience under study.

The triangulation process enabled the researcher to distinguish between relevant and irrelevant information. Research methods were expanded to enhance diversity, enrich understanding and accomplish specific goals (LoBiondo-Wood & Haber 2010:587).

- **Member checking**

Member checking is the most important method for validating the credibility of qualitative data (Lincoln & Guba 1985:293). Member checking is essential in the provision of feedback, as well as ensuring that the researcher reflects the participants' reality and life-experiences (Polit & Beck 2012:733). Similarly, member checking entails affording the research participants an opportunity to determine whether or not the initial findings and interpretations are consistent with their views and experiences they shared with the researcher. Member checking could be performed informally during data collection, and formally after the data has been collected and analysed (Polit & Beck 2008:545). Member checking occurred during the semi-structured IDIs and FGDs in the form of the researcher restating, summarising, paraphrasing and clarifying the information received from the participants in order to ensure factual correctness. The researcher looked for multiple influences and searches for what counted and what didn't counted.

- **Peer debriefing**

According to Streubert and Carpenter (2011:316), peer debriefing are processes that enable research facilitators to articulate and reflect on research procedures with a colleague or informal associate. Polit and Beck (2012:737) define peer debriefing as sessions with peers to review and explore various aspects of a study, sometimes used to enhance trustworthiness in a qualitative study.

Lincoln and Guba (1985:206) aver that peer review involves the researcher discussing the research process and findings with an impartial colleague who is experienced in qualitative methods. The researcher liaised with the Health Care Workers in the sub-district, experienced colleagues at the UNISA, and study supervisors on an on-going basis regarding the research process, including its concomitant data collection and analysis aspects.

- **Structural coherence**

Researcher maintained coherence throughout the study by knowing the subjects involved. Introduction and conclusions of the entire document provided coherency. The study was focussed, attention kept on key questions, purpose and problem statement. Transitions between paragraphs and sections helped coherency of the document. Consistent formatting was regarded as of importance (Badenhorst 2010:208-209).

3.6.2 Transferability

Transferability is an assessment criterion of trustworthiness, which ensures that findings are applicable in other settings (Polit & Beck 2008:539). Since the findings of a qualitative study are specific to a small number of particular environments and individuals, it is impossible to demonstrate that the findings and conclusions are applicable to other situations and populations. Designing a study in which multiple cases, multiple informants or more than one data gathering method is used, greatly strengthen the study's usefulness for other settings (De Vos et al 2011:419). Rich or dense descriptions and purposive sampling are some of the research techniques for ensuring that findings are transferable, that is, applicable in other settings with

verisimilitude variables. This was achieved through triangulation by using in-depth interviews, FGDs, field notes, independent coder and a literature control. Transferability was enhanced by the following aspects:

- **Dense description**

Dense description refers to a “rich and thorough description of the research setting, and of observed transactions and processes provided in the research” (Polit & Beck 2012:595). Lincoln and Guba (1985:204) emphasise that an important mechanism for promoting transferability is the amount and quality of information qualitative researchers provide in respect of the context of the study. Sufficient descriptive data and analysis processes have been provided in this study. The research findings were described in detail, with supporting quotations from the HIV-positive pregnant women and Health Care Workers.

- **Sampling of participants**

The HIV-positive pregnant women were observed and interviewed during routine ANC activities and they provided a broad overview of their experiences with regard to the availability and accessibility of the PMTCT programme. The researcher also observed the Health Care Workers during the usual course of their activities. The observational sessions, which lasted for an hour, involved sampling of activities on varying days, off duties, tea breaks and lunch hours. Health Care Workers with a variety of professional experiences and educational background were purposefully sampled to be key participants. All the participants allowed for deeper exploration and description of experiences with regard to the availability and accessibility of the PMTCT programme (Polit & Beck 2012:528).

3.6.3 Dependability

Dependability is an assessment criterion of trustworthiness for enhancing the possibility of similar results if the study is subjected to a validity test. This requires an audit (Brink et al 2010:119). Polit & Beck (2012:175) refer to dependability as evidence that is consistent and stable. Dependability was assured by collecting, recording, transcribing

and translating information as accurately as possible and by providing literature control, where appropriate. Dependability was enhanced by the following aspects:

- **Dense description of the research methodology**

The research design and its implementation described the execution of planned strategies, thus indicated a comprehensive description of the research design and methodology. The researcher was responsible for providing enough information so that another researcher reading the study would reach similar conclusions. The operational detail of data gathering addressed the fieldwork activities.

- **Audit strategies or trail**

According to Polit and Beck (2012:720), audit trail is the systematic documentation of material that allows an independent auditor of a qualitative study to draw conclusions about trustworthiness. All the data collection documents were kept as evidence that research was indeed executed. Multiple methods used for collected and interpreted data about phenomenon so as to converge on an accurate representation of reality were systematically documented. The research process was logical and well documented in order to provide a clearly refined understanding of the research setting (De Vos et al 2011:420).

- **Code-recode procedure**

Polit and Beck (2012:722) define coding as the process of identifying and indexing recurring words, themes or concepts within the data. Code-recode procedure and the step-by-step replication research method were done manually by the researcher and an expert in qualitative research. Emerging themes were identified after reading and becoming familiar with the first texts and thereafter coded. First several texts were coded fairly by using broad labels that corresponded to the study's main research questions. Thematising and coding blended each other, thus codes were never regarded as final and unchanging (Ulin et al 2005:325).

- **Triangulation**

Triangulation is the use of multiple sources or referents to draw conclusions about what constitute the truth (Polit & Beck 2012:175). The researcher revealed the complexity of a phenomenon by using multiple means of data collection such as interviews, FGDs and field notes to converge on the truth.

- **Peer examination**

The enquiry auditor, generally a peer, followed the processes and procedures used by the researcher in the study and determined whether they were acceptable, that was, dependable (Brink et al 2010:119).

3.6.4 Confirmability

Confirmability is a quality assurance mechanism for ensuring that the research results reflect the true account of the informants' shared knowledge with the researcher (Polit & Beck 2012:722). The concept of confirmability is the qualitative researcher's concern for objectivity. Confirmability ensures that steps are taken to ascertain as far as possible that the study's findings are the results of the accurate experiences and ideas of the participants, rather than the characteristics and preferences of the researcher (Shenton 2004:72).

Furthermore, Lincoln and Guba (1985:318) and Polit and Beck (2012:722) refer to confirmability as the objectivity or neutrality of data. Confirmability guarantees that the findings, consensus and recommendations are supported by data, and that there is internal agreement between the researcher's interpretation and the actual evidence (Brink et al 2010:119). Confirmability was attained by maintaining an audit trail whereby all the records pertaining to the study were meticulously kept for continuous referrals (Holloway & Wheeler 2002:255). A consensus discussion took place between the coder and the researcher to agree on themes, categories and sub-categories. The aspects of confirmability are as follows:

- **Triangulation**

Brink et al (2010:209) define triangulation as the use of multiple methods or perspectives to collect and interpret data about some phenomenon; to converge on an accurate representation of reality. The participants' experiences with regard to the availability and accessibility of the PMTCT programme were explored and described in a natural setting. The data were linked to their original sources only. In this regard, the data were derived solely from Health Care Workers working in three clusters, and HIV-positive pregnant women enrolled on the PMTCT programme in the very same clusters, and as such, linked to them only.

- **Peer examination**

The ideas and interpretations of the researcher, research assistant and peers working together as a team were triangulated. An independent researcher analysed selected transcripts and compared the coding of emerging categories and sub-categories with those of the researcher and research assistant. Differences were discussed and resolved. The findings reflected the participants' experiences and not the researchers' biases, motivations and perspectives (Polit & Beck 2012:585).

- **Reflexivity**

Reflexivity is the process of reflecting critically on the self and of analysing and making note of personal values that could affect data collection and interpretation (Polit & Beck 2012:179). Reflective appraisal of the project was undertaken by means of evaluating the effectiveness of the process of inquiry (Shenton 2004:71). The researcher devoted time and energy on analysing and documenting data. Self scrutiny and asking questions on a continuous basis about how previous experiences, values, background and prejudices shaped the study methods, analysis and interpretation was done (Polit & Beck 2012:597). A reflective diary was kept throughout the fieldwork process.

- **Audit trail**

An audit trail was created through collection of data by interviews and FGDs, transcripts and guides, analysed data products and field notes by the researcher and the research

assistant. Scrutiny of the data by the external reviewers was done in order to ensure the trustworthiness of the data and the meanings attached to them. Although such auditing was complex, it served as a tool for persuading other researchers that qualitative findings were worthy of confidence (Polit & Beck 2012:595). All data collected were stored in a safe place together with decisions about coding thus providing evidence of research findings.

3.7 ETHICAL CONSIDERATIONS

A number of ethical issues were addressed before and during this study as indicated in Chapter 1. Ethical considerations are principles of respect of persons, beneficence and justice. The researcher's presentation of the research results was unprejudiced and original. It recognised all references and gave due credit to those contributed to the study. Findings will be made available to interested participants and the institutions that granted permission to conduct the study (Creswell 2009:89). The following ethical considerations contributed to the professionalisation of the study's execution between the researcher and the participants. Basic ethical principles of autonomy, justice, beneficence and non-maleficence were adhered to as indicated in Chapter 1 on pages 18 to 20 of this study. Domain specific ethical concerns relate to generally "sensitive" areas of research such as HIV/AIDS and pregnant women and such areas are known for ethical and legal risks.

3.7.1 Ethical consideration related to data collection

The terms "interviews" and "participants" were used in this study to refer to evidence derived from a whole range of inputs pertinent to the research topic. On account of the sensitivity of the topic and with reference to the confidentiality principle – which is highly valued in the delivery of PHC related services – all interviews were conducted on the understanding that no comment and opinion would be attributed to any individual. This led to a very wide repertoire of comment and opinion, on which the report drew extensively. The identification of potential participants was a concerted effort between the researcher and the PMTCT programme nurses (Operational Managers) at the three clusters in Madibeng Health sub-district.

Participants were fully informed of the purpose of this study, and they understood the consequences of agreeing to their participation in the discussions and interviews. They were informed of the potential benefits and risks, factors which induced their voluntary participation in the study. Since the research interview style is open-ended, no formal questions were drafted. Instead, probing questions for discussions were developed and subsequently viewed by the Research Directorate of the North West Province's Department of Health, as well as UNISA's Department of Health Studies Higher Degrees Committee.

The identification of potential participants was a concerted effort between the researcher and the PMTCT nurses (Operational Managers) at the three clusters. Once the final list of participants was established, these potential participants were provided with an introductory letter from the researcher outlining the topic, a consent form, and an information sheet containing interview guidelines (see Appendices D, F, G and I respectively). Participants were informed that the findings of the study would be published, and that the report would be available to them upon request. They were also informed that they could withdraw at any time from participating in the study or even decline to answer certain questions in the event that they felt their human rights and dignity were violated.

3.7.2 Ethical issues related to sampling

The participation of Health Care Workers and HIV-positive pregnant women themselves was a key feature of the research methodology undertaken in this study. The participants and their range of knowledge and experiences were categorised in a manner designed to elicit data that reflected at least some of the diversity of the population in the Madibeng sub-district. Since devising the strategies intended to facilitate the availability and accessibility of the PMTCT programme is deemed essential to respond to HIV-positive pregnant women's needs, the latter's participation in the semi-structured face-to-face interviews was of critical importance. Health Care Professionals were recruited for the focus group discussions, while HIV-positive pregnant women were recruited for the in-depth individual interviews (IDIs).

The participants' identity was not made public without their permission. For this reason, no specific statements are attributed to individual participants by names in this study.

The participants were purposively and identified mostly through the PMTCT nurses of the three clusters. For the FGDs, Health Care Professionals consisted of professional nurses, pharmacists, M2M mentors, Mother and Child Women's Health and PMTCT programme nurses. HIV-positive pregnant women were selected for the IDIs.

The researcher explained the purpose of the study, and further indicated that participation was voluntary. Subsequent to the participants being made aware of their rights, they then signed a written consent form.

3.7.3 Enhancing scientific integrity of the study

Scientific integrity refers to honest practices commonly accepted within the scientific community for conducting and writing research reports. In order to avoid plagiarism, all sources and references used in the study were acknowledged. The research process and its subsequent findings were undertaken without manipulating data and information obtained from the participants during data collection and data analysis phases. Individuals who contributed towards the successful completion of this study were duly acknowledged. Strategies and measures employed by the researcher enhanced the trustworthiness of this study, and served to ensure its scientific integrity and credibility. Furthermore, the researcher intended to share the results with the institutions on whose premises permission was granted to conduct the study. The scientific community was taken serious cognisance of by the intended publishing of the findings on accredited academic journals.

3.8 CONCLUSION

This chapter discussed the research design and methodology, including the research setting, research population, sample size and sampling technique, data collection, data collection instruments, piloting of the data collection instruments, trustworthiness and ethical considerations. A qualitative, exploratory, descriptive approach that is contextual in nature was used in respect of the research design and methodology.

CHAPTER 4

DISCUSSION OF FINDINGS AND LITERATURE CONTROL

4.1 INTRODUCTION

Chapter 4 will essentially focus on the research findings, and compares the findings with those of other previous studies. Data analysis is also presented with reference to the reviewed literature; the rationale being that conceptualisation of the findings also merits a context against which such comparison and conceptualisation are made. The findings are presented in a narrative form, and the participants' responses are quoted verbatim in order to support the findings. The current chapter describes the experiences of HIV-positive pregnant women and the experiences of Health Care Workers with regard to the availability and accessibility of the PMTCT programme.

4.2 SAMPLE DESCRIPTION PER HEALTH CLUSTERS

The study was conducted in three phases. Phase 1 was designed to explore and describe the experiences of both the HIV-positive pregnant women and Health Care Professionals with regards to the availability and accessibility of the PMTCT programme in the Madibeng sub-district of the North West Province.

The sample size consisted of ten HIV-positive pregnant women; five from the first cluster (B), two from the second cluster (I), and another three from the third cluster (J). This category of participants participated during the individual semi-structured IDIs. Twenty one HCWs were selected for participation in the FGDs. Seven was from B cluster, eight from I cluster, and six from J cluster.

4.2.1 Demographic profiles

(See Appendices K and L).

Tables 4.1 and 4.2 illustrate the demographic profiles of the sampled participants in this study.

Table 4.1 Table of participants – HIV-positive pregnant women (N=10)

Code	Age	Ethnic group	Home language	Residential area	Marital status	Educational level	Employment Status-self	-partner	No of children	Religion
P1	20	Tsonga	Setswana	Bapong	Single	Passed Grade 11	No	Yes	0	Christian
P2	34	Tsonga	Shangaan	Bapong	Single	Never attended school	No	No	2, had ectopic pregnancy in 1999	Old Apostolic
P3	30	Sotho	Sesotho	Bapong	Single	Passed Grade 7	Yes-firm	Yes-mine	0	Miracle Centre
P4	31	Tswana	Setswana	Bapong	Single	Passed Grade 8	No	No	3	Zion
P5	18	Tswana	Setswana	Bapong	Single	Passed Grade 11	No	Yes-mine	0	Roman Catholic
P6	32	Tswana	Setswana	Ikhutseng	Single	Passed Grade 10	No	Yes-brewery	1, had Miscarriage in 2005	East Heaven Church
P7	39	Zulu	Zulu	Ikhutseng	Single	Passed Grade 9	No	Yes-brewery	3	Twelve Apostolic
P8	29	Tswana	Setswana	Jericho	Single	Passed Grade 10	No	Yes-mine	0	Flame
P9	24	Tswana	Setswana	Jericho	Married	Passed Grade 12	No	Yes-firm	0	Apostolic church
P10	21	Tswana	Northern Sotho	Jericho	Single	Passed Grade 12	No	Yes-Police	0	Roman Catholic

(P=Participant)

Table 4.2 Table of participants – Health Care Workers (N=21)

Code	Age	Category	Area of work	Marital Status	Educational Level	Years of work experience with HIV-positive pregnant women	Religion
P1	49	Professional Nurse	Bapong Cluster	Single	Diploma in General Nursing Science, Community, Midwifery and Psychiatry	12	Christian
P2	44	Professional Nurse	Bapong Cluster	Married	Diploma in General Nursing Science	15	Lutheran
P3	38	Professional Nurse	Bapong Custer	Single	Diploma in General Nursing Science	02	Reformed Church
P4	44	Professional Nurse	Bapong Cluster	Married	Diploma in comprehensive Nursing Science	10	Apostolic
P5	33	Professional Nurse	Bapong Cluster	Single	Diploma in General Nursing Science	02	Christian
P6	28	Enrolled Nurse assistant	Bapong	Single	Auxiliary Nursing	02	Christian
P7	26	Professional Nurse	Bapong	Single	Diploma in General Nursing Science	02	Christian
P8	59	Professional Nurse	Ikhutseng	Single	Diploma in General Nursing Science	02	Inter-Pentecostal Holy Church

Code	Age	Category	Area of work	Marital Status	Educational Level	Years of work experience with HIV-positive pregnant women	Religion
P9	28	HIV/Aids Counsellor	Ikhutseng	Single	HIV Counselling Certificate	02	Christian
P10	33	Post Basic Pharmacist Assistant	Ikhutseng	Single	Post Basic Pharmacist Assistance and HIV/Aids management Certificates	03	Mission Church
P11	50	Professional Nurse	Ikhutseng	Married	Diploma in Midwifery, Diploma in Primary Health Care Nursing and Degree in Community Nursing Science & Administration	02	African Methodist Church
P12	42	Professional Nurse	Ikhutseng	Single	Diploma in General Nursing Science	03	Christian
P13	37	Professional Nurse	Ikhutseng	Married	Diploma in General Nursing Science	02	Christian
P14	30	M2M Mentor Mother	Ikhutseng	Single	Certificate in Professional Counselling	04	Christian
P15	49	Professional Nurse	Ikhutseng	Divorced	Diploma in General Nursing Science, Midwifery, Primary Health Care, Degree in Occupational Health Nursing	08	Uniting Reformed Church

Code	Age	Category	Area of work	Marital Status	Educational Level	Years of work experience with HIV-positive pregnant women	Religion
P16	36	Professional Nurse	Jericho	Married	Diploma in General Nursing Science, Midwifery, Community and Psychiatry	06	Christian
P17	53	Professional Nurse	Jericho	Married	Bachelor of Nursing Science	22	Christian
P18	28	Professional Nurse	Jericho	Married	Diploma in General Nursing Science, Midwifery, Community and Psychiatry	03	Christian
P19	30	HIV/Aids Counsellor	Jericho	Single	Certificate in HIV/Aids Counselling	02	Reconciliation
P20	34	HIV/Aids Counsellor	Jericho	Single	Certificate in HIV/Aids Counselling	02	Porter's House Christian
P21	45	Enrolled Nurse Assistant	Jericho	Married	Enrolled Nurse Assistant	06	Christian

(P=Participant)

4.3 QUALITATIVE DATA ANALYSIS

In order to better understand the meaning of the data and identify categories and sub-categories from the collected data, the analysis, organisation and interpretation of data were conducted manually according to Tesch's method of data analysis for qualitative research (Creswell 2009:186) as explained in Chapter 3 of this study. The data analysis process was intended to find commonalities and differences in the interviews and the focus group discussions, and then group these into broader, more abstract, overarching categories of meaning that capture much of the data (Lobiondo-Wood & Haber 2010:93). The researcher analysed the data herself, and was guided by a senior research supervisor.

Once all the interviews and FGDs were transcribed, the transcripts were read and short notes were made. Each document was read several times in order to make meaning of its content and all the identified topics of meaning were then listed. Similar topics were then grouped together, tabled and arranged as major themes. The patterns of data were clustered together from similar topical themes and then organised into categories. This means most descriptive wording for the topics was identified and the topics were formulated into categories. Categories refer to meaningful compartments on which the data analysis is based. The data belonging to each category were analysed further and grouped into sub-categories. Finally, sub-categories were attached to the main thematically organised categories. By means of the interpretation process, the content of each category was summarised in order to arrive at meaningful conclusions. An independent coder assisted with reaching consensus on the thematic analysis of data. A literature control was conducted to validate the identified themes.

4.4 SUMMARY OF THE FINDINGS

Triangulation was used in interpretation of data so as to converge an accurate representation of reality. Data was collected by interviews, FGDs, field notes and observations. The research assistant took the field notes and the final notes were compiled immediately after every interview and FGD. Both interviews and FGDs were recorded to avoid loosing data. Coding by the researcher and the independent coder was done. Transcripts were labelled according to date, codes meaning numbers and first letters of the research sites. Evaluated strategies as presented in Chapter 6 were

scored by means of calculated numbers. The use of numeric data in qualitative study has been highlighted in Chapter 7 under the limitations of the study.

After inductively working on data analysis of the two sets of data (for HIV-positive pregnant women and for the Health Care Workers), the researcher worked deductively to combine them. Deductive reasoning is the process of developing specific observations from general principles (Brink 2006:6). The researcher deduced that both the HIV-positive pregnant women and the Health Care Workers encountered similar and different experiences with regards to the availability and accessibility of the PMTCT programme. Below is the summary of the similar and different experiences of both the HIV-positive pregnant women and the Health Care Workers:

Table 4.3 Similar and different experiences of the HIV-positive pregnant women and the Health Care Workers

SIMILAR EXPERIENCES	DIFFERENT EXPERIENCES
<ol style="list-style-type: none"> 1. Lack of and shortage of resources 2. Stressors about HIV status 3. Fear of disclosure by HIV-positive pregnant women 4. Emotional feelings as a result of contracting diseases 5. Non-disclosure due to stigmatisation 	<ol style="list-style-type: none"> 1. Disclosure and acceptance of HIV status 2. Taking ARVs to protect the babies 3. Satisfactory advices, health education help and good health care services 4. HIV-positive pregnant women not practicing what they were taught 5. Lack of PMTCT programme knowledge by some facilitators and some Health Care Workers 6. Lack of support from the Health sub-district management

Emotional turmoil was voiced by the HIV-positive pregnant women. Most of them explained that there is shame, anger and pain of being HIV-positive and attending the PMTCT services. The emotional pain is mostly worsened by not accessing services due to shortages of ARVs, staff and of transport. HIV/AIDS related stigma and discrimination was also voiced by the participants. They indicated that at times they are served in park homes and parking areas. Isolation in the clinics and at homes was also reported. The

participants alluded to good communication and counselling services offered by Health Care Workers. Health education on their condition was also deemed good.

Health Care Workers had problems with infant feeding as they reported that most of the HIV-positive pregnant women do not exclude breastfeeding post delivery. Instead they mixfeed their babies and this resulted in sickness. This challenge was compounded by the culture where a new mother had to feed regardless of health status. Lack of disclosure of mother's HIV seropositive status to partner, family and in-laws worsened the problem. Health Care Workers decried the fact that follow-up checks are problematic as after diagnosis mothers fail to come back. Due to shortages of Health Care Workers, door-to-door campaigns have been reduced.

4.5 DISCUSSION OF THE MAIN THEMES (HIV-POSITIVE PREGNANT WOMEN)

During the analysis of data derived from the semi-structured IDIs and their transcripts, five main themes emerged from the findings of this study in respect of the **HIV-positive pregnant women**, namely:

- (1) Acceptance of one's sero-positive status
- (2) Maternal concerns
- (3) Stressors about HIV status
- (4) Lack and shortage of resources
- (5) Support by health care professionals and family

Below is the summary of the themes, categories and sub-categories identified in the data analysis of the transcripts of HIV-positive pregnant women:

Table 4.4 Overview of the themes, categories and sub-categories of HIV-positive pregnant women's experiences

THEMES	CATEGORIES	SUB-CATEGORIES
1 Acceptance of one's sero-positive status	1.1 Acceptance of HIV just like any disease 1.2 Acceptance of self and falling pregnant while HIV-positive	1.1.1 Acceptance of HIV status 1.1.2 Known HIV status 1.2.1 Disclosure and acceptance of self 1.2.2 Taking ARVs to protect the child
2 Maternal concerns	2.1 Unknown HIV status prior to falling pregnant 2.2 Help, health education and advises	2.1.1 Practice of unprotected sex 2.1.2 Participants noticed the HIV status during first ANC booking 2.1.3 Pregnant with the first born 2.2.1 Advices and communication are good 2.2.2 Education about how to live with HIV and with the child 2.2.3 Education about medication and diet
3 Stressors about HIV status	3.1 Emotional affection as a result of contracting diseases	3.3.1 Taking blood tests alone in the absence of the partner 3.3.2 Heartbroken 3.3.3 Bad and offended 3.3.4 Taking ARVs and TB treatment 3.3.5 ARVs stronger than contraceptives 3.3.6 Side effects of ARVs such as vomiting and dizziness
4 Lack and shortage of resources	4.1 Long waiting periods and nurses' high workloads 4.2 Layout and size of facility	4.1.1 Shortage of staff 4.1.2 Services poor and of low standard 4.1.3 Spending the whole day at the facility 4.1.4 Returned home without receiving help 4.2.1 Pregnant women not attended to separately 4.2.2 Maternity side deliveries are many

THEMES	CATEGORIES	SUB-CATEGORIES
		4.2.3 Clinic small
5 Support by health care professionals and family	5.1 Satisfactory health care services offered by health care professionals 5.2 Family support	5.1.1 HIV counselling done and not stressing 5.1.2 ARVs provided to prevent the child from HIV infection 5.1.3 Adhering to prescribed treatment 5.1.4 Services satisfactory and give life 5.1.5 Nursing staff fine with patients 5.1.6 Seen by the Doctor 5.2.1 Disclosure to partner, children and family, 5.2.2 Encouragement of others to test for HIV 5.2.3 Reminded to take the ARVs

4.6 THEMES, CATEGORIES AND SUB-CATEGORIES ACCRUING FROM HIV- POSITVE PREGNANT WOMEN'S DATA ANALYSIS

This sub-section presents and discusses the various themes, categories, and sub-categories accruing from the HIV-positive pregnant women's analysed data.

4.6.1 Theme 1: Acceptance of one's sero positive status

Acceptance of one's sero-positive status was amongst the themes that emerged in this study. The participants revealed a positive attitude in accepting their sero-positive status and in believing that like any other disease, HIV and Aids is a disease from which one could survive when treatment was taken seriously. Acceptance of one's sero-positive status was expressed in terms of striving to live day-by-day with HIV, rather than delving on the thought of dying.

4.6.1.1 Category 1.1: Acceptance of HIV just like any disease

Most of the HIV-positive pregnant women explained that they accepted their status, but adhered to the recommended treatment options. The acceptance of HIV, like any other disease, includes the acceptance of one's known HIV status.

Sub-category 1.1.1: Acceptance of HIV status

The findings serve to confirm that the HIV-positive pregnant women opted to accept their HIV status. They further reported that they accepted the various treatment options recommended. This is evident from the statements such as:

“Heela! Sista (Motsayakarolo a gemela kwa botennye)...Maitemogelo a ka ke tla
reng? Nna ke ile ka ikamogela. Ke tsaya HIV jaaka sick e nngwe le e nngwe e
motha a ka nnang le yona.” **(BP4)**.

(“Hey! Sister (Participant took a deep breath)... What will I say about my
experience? I only accepted. I accepted HIV as any other disease which a human
being could have.”) **(BP4)**.

"Maitemogelo a ka ke gore ke ne ke ntse ke itshireleditse sentle. Ke ja sentle. Ke itlhokomela. E rile fa nako e ntse e tsamaya ke ile ka amogela le ga jaanong ke sa ntse ke tsaya treatment." **(BP5).**

("My experience is that I've been protecting myself properly. I eat properly. I take care of myself. Over time, I accepted because I still take my treatment".) **(BP5).**

Sub-category 1.1.2: Known HIV status

The participants reported that they knew their HIV status, which reinforced acceptance of themselves in order to look well. The participants expressed their acceptance of HIV just like any disease as follows:

"Nna ke right. Ke phela sharp ka HIV ya ka, ga kena bothata. Ke amogetse. Ga ke batle gore e ntaole. E utlwa ka nna." **(IP2).**

("I am well. I'm living with my HIV status, I don't have any problem. I have accepted. I don't want it to control me. I control it.") **(IP2).**

"Fa diteko tsa HIV di sena go dirwa, ke ile ka amogela dipholo ka ba ka ipolella gore se se ka diragalang mang ka mang." **(JP2).**

("After the HIV tests were conducted, I accepted the outcome and told myself it could occur to anybody.") **(JP2).**

The general perception by pregnant HIV-positive women of routine counselling and testing as 'compulsory' also reinforces women's acceptance of HIV. The perception that HIV testing was part of ANC routine and compulsory has also been documented in other African settings (Angotti, Dionne & Gaydosh 2011:307). Rajumba, Neema, Tumwine, Tylleskar and Heggenhougen (2013:189), also reported in their study on pregnant women's experiences that routine HIV counselling and testing services were known and acceptable to mothers.

According to Sarker, Papy, Traore and Neuhann (2009:283), the acceptance of HIV testing and returning for results among pregnant women in Nouna District Hospital of Burkina Faso was 40%. Interviewed women were satisfied with the services and the

majority desired to disclose their HIV status. Furthermore, many pregnant women expect that greater availability of quality counselling and testing services and access to ARV treatment decreases the fear of HIV, and increases the uptake of HIV testing, largely due to their recognition of the benefits of being aware of their status and subsequently adhering to recommended treatment (Du Bois 2007:15).

4.6.1.2 Category 1.2: Acceptance of self and falling pregnant while HIV-positive

Throughout the interviews, most of the HIV-positive pregnant women believed that accepting themselves was advantageous as it provided them with an opportunity to save their newly-born babies from HIV infection. The benefits mentioned included access to treatment and guidance on positive living. The acceptance of self and falling pregnant while being HIV-positive was emphasised by the disclosure and acceptance of self and taking ARVs to protect the babies.

Sub-category 1.2.1: Disclosure and acceptance of self

The findings serve to confirm that the HIV-positive pregnant women disclosed their HIV status and accepted themselves. They further reported that the PMTCT programme services motivated them to disclose their status. This was expressed by the quotations like:

“Ke itsaya jaaka mang le mang o a phelang mo lefatsheng. Ga ka itsenya stress. Gore ke lemoge gore ke tshwaetsegile ka gonne ke ne sa itse, ke ka ngwana yo ke neng ke mo imile ka 2011. Ke dirile diteko ka 2011. Ga go ak gaba le mathata, ba ne ba dura counselling. Ke ile ka ya tliliniking ya Majakaneng. Ba ile ba testa ngwana mme fa fitlhela e le gore ga ana mogare wa HIV. Ba ne ba mo fa treatment ya lebotlolo le le white gore a new for six months. Le ga jaanong jaana ke imole ke ntse ke itse gore ke tshwaetsegile ka mogare wa HIV”. (**BP4**).

(“I only take myself as any other person living on earth. I didn’t allow stress to get into me. For me to know that I’m infected is through the child I became pregnant with in 2011. I did the tests in 2011. No problems existed, they provided counselling. I went to Majakaneng Clinic. They conducted tests on the child and found that he was not infected with HIV. They gave him the treatment consisting

of a white substance in a bottle to drink for six weeks. And even now I became pregnant knowing that I am infected with HIV infection".) (**BP4**).

"Ditirelo tsa lenaneo la [PMTCT] di imphile bophelo bo ke bo itumellang le ba ngwana. Ke itshwere sentle ebole ke itumella seo. Ke ithokometse ebole ke eletsa gore fa ke belega ngwana wa me a tle a siame gape a nne le botshelo jo bontle." (**JP1**).

("The [PMTCT] services have given me a life which is favourable for me and the child. I do take care of myself and feel happy about that. I am happy because I take care of myself and wish that when my child is born just be fine and have a good life".) (**JP1**).

Sub-category 1.2.2: Taking ARVs to protect the child

HIV-positive pregnant women indicated that they took ARVs to protect their babies from being HIV infected. They further reported that ARVs prevented the transfer of HIV infection from the mother to the child. Some participants indicated the following:

"Ka 2012 re ile ra botsa Dr ya ko Phokeng clinic gore are ka nna le ngwana. (Motsayakarolo a nyeba). Dr o ne a re re dire di teste tsa CD4 count le viral load, nna ke ne ke se sharp, ntate a le sharp CD4 count e le kwa godimo and viralload e le kwa tlase. Ke ile ka bolellwa go re ke tswelle pele ka treatment. Di results tasaka dilile tsa tla morago di le sharp, CD4 count e le kwa godimo and viral load e le kwa tlase. Ke fa Dr a re re ka nnetse ra nna le ngwana. Ke ka moo ke imileng jaana." (**BP2**).

("In 2012 we asked the doctor from Phokeng whether we could have a child or not (Participant smiling). The doctor then said we had to go for tests for CD4 count and the viral load. I was not comfortable with that, but my husband was. His CD4 count was high while the viral load was low. I was informed to go on with the treatment. After the tests, my results indicated that my CD4 count was high and viral load low. The doctor then said we could have a child. That is the reason why I'm now pregnant.") (**BP2**).

"Maitemogelo a ka jaaka ke tshwaeditswe ke HIV...Mmm ke ne ke sa nagana gore nka nna le ngwana ka go re ba rile kena le HIV. Ke ne ka tla mo tliniking ba

re ga go na molato le ngwana a tlhaga a se na mogare wa HIV ka gonne ke nwa di ARVs tse eleng ditlhare tas go thibela magare wa HIV go tswa mo go mme go ya kwa leseeeng la gagwe.” (**BP3**).

(“My experience as an HIV infected person... Mmm I didn’t think of having a child since I was infected by HIV. I came to the clinic and was told that since I was using the ARVs, there was no problem of the child being delivered with an HIV infection because of the pills that prevent the transfer of HIV infection from the mother to the child.”) (**BP3**).

“Ba rile mo go nna ke tswelele ken wed di ARVs ka gonne ke imile ke ntse ke di nwa. Ke simolotse go di nwa ka 2010.” (**BP3**).

(“They told me that I must continue taking ARVs because I became pregnant while I was taking them. I started taking them in 2010.”) (**BP3**).

“Le ga jaanong jaana ka boimana jo ke sa ntse ke nwa di ARVs. Ke neelwa tsa dikgwedi tse tharo.” (**IP1**).

(“Even now during my current pregnancy, I still take my ARVs. I have been provided with three months’ supply.”) (**IP1**).

The routine provision of HIV testing helped HIV-positive pregnant women to overcome fear and accept themselves. On the other hand, most HIV-positive pregnant women strongly believed that HIV testing was beneficial, especially by enabling them to protect their babies from HIV infection through enrolling in the PMTCT programme. In this regard, their high acceptance could be a reflection of conformity to the moral imperative of doing ‘good’ for their babies. They appreciated themselves as they could access HIV treatment. The need to protect their babies and the concern for their own health have been documented in other African settings as key reasons for women’s HIV testing during pregnancy (Chandisarewa, Stranix-Chibanda, Chirapa, Miller, Simoyi, Mahomva, Maldonado & Shetty 2007:843; Mugore, Engelsmann, Ndoro, Dabis & Perez 2008:660).

4.6.2 Theme 2: Maternal concerns

One of the themes that emerged in this study was that of maternal concerns. HIV-positive pregnant women tend to have concerns with their babies' health and HIV status after birth. These concerns were notably triggered by HIV-positive test result.

4.6.2.1 Category 2.1: Unknown HIV status prior to falling pregnant

Most of the HIV-positive pregnant women participants reported that they noticed their HIV status during their first ANC booking. For most of them, concerns about the future and care for their children dominated the interviews. The desire for support to ensure that their unborn children do not acquire the HIV infection was another dominant concern for the HIV-positive pregnant women. Unknown HIV status prior to falling pregnant includes practice of unprotected sex, notification of HIV status during the first ANC booking, and being pregnant with the first born child.

Sub-category 2.1.1: Practice of unprotected sex

The findings indicated that the HIV-positive pregnant women practiced unprotected sex prior to falling pregnant. One participant also revealed that she was using an injection contraceptive, but the ARVs were stronger than that and she fell pregnant. Both the participants and their partners engaged in unprotected sex and were not aware of their HIV status. The participants commented as follows:

“Ga ke itse gore ke simolole kae. Ke moimana yo nang le mogare wa HIV. Ke lemogile ka mogare yo fa ke ne ke tla go buka mara since mogo ga ya ka ya ntshwara pila. Ke ke sa dira diteko tsa go tlhathhoba mogare wa HIV pele ke ima.”
(BP1).

“(I don't know where to start. I am a pregnant woman who contracted an HIV infection. I noticed this when I came to make an appointment for a pregnancy check, but since then it became serious”. I didn't conduct HIV tests before I became pregnant.”) **(BP1).**

“Re ile ra ya kwa tliliniking ya Rustenburg fa ke ne ke lwala ka 2008. Molekane wa ka o ile a kopa gore re dire diteko tsa HIV. Ke mo re ile ra lemoga fa re

tshwaetsegile ka mogare wa HIV. Ka 2009 re ile ra simoloa go nwa treatment mmogo.” (**BP2**).

(“We went to the clinic in Rustenburg due to an illness in 2008. He (my partner) asked for the HIV tests to be conducted on us, then I realised that I was HIV-positive and he also tested and found that he was HIV-positive. In 2009 we started taking treatment together.”) (**BP2**).

“Ke ne ka dira diteko tsa HIV mme ka filthelwa ken a le mogare. Ke ka botswa gore ke ikutlwa jang. Ke ne ka romelwa gape le ka ntihela go tlthatlhobiwa CD4 count mme ene yare fa dipholo di tla CD4 ya bo ele 120. Ke ne ka romelwa kwa Odi Hospital. Counselling e ne ya dirwa gape ke fa ke simolola go fiwa supply ya di ARVs tsa dikgwdi tse tharo.” (**IP1**).

(“I did some blood tests and it was found that I was HIV-positive. I was asked how I felt about it. I was sent for the CD4 count test, and the results indicated a CD4 count of 120. I was then transferred to Odi Hospital. I went for counselling and thereafter started taking ARVs with a three months’ supply.”) (**IP1**).

“Ke ne ke rekisa kwa difemeng, fa ke fitlha kwa gae ka fitlhela ke se monate. Ke ne ke sa ya kgwedding fela ka ya tliniking. Fa ke filtha ba ne ba re ke imile. Ke ne ka fitlhela e le gore gape ke na le mogare wa HIV. Ke ne ka newa dipilisi tsa go thibela gore mogare wa HIV o sa fetela kwa ngwaneng yo ke mo imileng. Ke simolotse go itse ka June 2012, fela ka simolola go nwa di ARVs ka di 8 July 2012.” (**JP1**).

(“I was selling at the firms. When I arrived home, I was not feeling well. My menstruation periods stopped and I decided to consult at the clinic. On my arrival, I was told that I was pregnant. I also found out that I was HIV-positive. I was given pills to prevent the virus from being transmitted to the unborn child. I started knowing in June 2012, and started taking ARVs on 08th July 2012.”) (**JP1**).

Sub-category 2.1.2: Participants noticed the HIV status during first ANC booking

The findings revealed that the participants noticed their HIV status during their first ANC booking. HIV tests were not conducted before conception. Other participants conducted

the tests when they were already sick from other illnesses. Participants reported as follows:

“Ke lemogile fa ke ne ke tla go buka jaaka ke le moimana. Ke ne ka tsewa madi a diteko tsa HIV fa ke se na go counselwa for the sake ya ngwana. Pelo ya me e ne e le botlhoko. Ke ne ke dirisa lemao go thibela pelegi, ke fa ke tla lemoga gore di ARVs di matla go feta lemao. Ke bukile nako e sa ntse e le teng. Badiri ba nthusitse tota ka dikakaknyo le ka ka go nwa di ARVs.” (**IP2**).

(“I noticed when I came to make a booking for my pregnancy. Blood was taken after attending pre-counselling for the sake of the child. I was heartbroken. I was using an injection as I found the ARVs to be stronger than an injection. I booked while there was still time and blood was taken properly after pre-counselling. Employees [healthcare workers] offered helpful advice on how to take the ARVs.”) (**IP2**).

“Ke lemogile ka di 10 October 2012 go re ke tshwaetsegile. E ne ya se ntseye sentle kgang e, mara e rile fa ke ntse ke lemoga ka ipolella gore ke tla nna ke ntse ke tsaya treatment go re ngwana a sa tshwaetsega.” (**BP5**).

(“I realised on the 10 October 2012 that I’m infected. I felt bad about this issue, but when I realised that I told myself that I will start taking my treatment so that my child must not be infected.”) (**BP5**).

Sub-category 2.1.3: Pregnant with the first born

Most of the HIV-positive pregnant women indicated that they were not familiar with the HIV signs and symptoms, and found that they were HIV-positive pregnant with their first born during consultations for other illnesses at the health care facilities. They narrated some of their experiences thus:

“Ke lemogile gore go botlhokwa gore ke dire se, go attenda ANC gore ke sireletse ngwana wa ka. Nako e nngwe go nna ignorant ga go thuse sepe. Fa ke sena go find out gore ke pregnant ka August 2012, ke ne ka dira di teste mme ka fitlhela ke tshwaeditswe ka mogare wa HIV. Ga jaanong jaana ke mo kgwedding ya bosupa ya boimama.” (**JP2**).

(“I realised that it is important for me to attend the antenatal clinic service to save my child. Sometimes you become ignorant and that doesn’t help at all. After finding out in August 2012 that I was pregnant, I did HIV testing and found that I am HIV-positive. I’m now seven months pregnant.”) **(JP2).**

“Gore ke ipone jang? Ke bone ke tshetswe ke kgwedi, matswele a tlala, ke tlhatsa ebole ke tlhoka le keletso ya dijo. Ke ne ka tla mo tlilinking go dira di bookings tsa boimana. Ke imile gape ke ikemiseditse go tswelela ka go nwa di ARVs. Dipilisi tse di thusa gore ngwana a sa tshwaetseg.” **(JP3).**

(“You mean how I noticed? I missed my periods, my breasts became full, nipples changed, I was vomiting and I lost my appetite. I came to the clinic to make an appointment to start with the bookings for pregnancy. I am pregnant and I am determined to continue taking the ARVs. These pills help the unborn child not to be infected.”) **(JP3).**

Unknown HIV status prior to falling pregnant becomes a maternal concern when pregnant women do not have access to HIV testing with pre-and post-test counselling to guide them to a PMTCT programme if needed. Even when services are neither available nor accessible at the appropriate place and time during antenatal care, pregnant women’s choices for PMTCT are limited. When women learn their status early enough, they could choose abortion or some other intervention (Nguyen 2009:68). Equally, in many countries a large number of women first find out they are HIV-positive through antenatal testing programmes. While this could be very stressful time for women, these programmes are in place to ensure that HIV-positive women are offered the correct care and support during their pregnancy, and that all necessary steps are taken to reduce the chances of their child being infected with HIV. In a study conducted at Toronto in 2010 on HIV and Pregnant by Rochon (2012:66) it was further reported that all the women related their fears of infecting their children, and the stress involved in having to wait to find out if their unborn babies would be HIV negative. Most pregnant women in the study found the pregnancy emotionally draining, wondering the consequences a child born HIV-positive. Issues emanating from the concerned HIV-positive pregnant women included the following:

- Availability and quality of local PMTCT programme services.
- Availability and quality of local family planning clinics with staff that have been trained in HIV care and support (Du Bois 2007:10).

4.6.2.2 Category 2.2: Help, health education and advises

The importance of increasing HIV knowledge among HIV-positive pregnant women was highlighted. HIV education, testing, early ANC booking, counselling and advice on infant feeding were among the topics mentioned. The HIV-positive pregnant women showed more interest in activities such as health education talks and counselling sessions. Dissemination of PMTCT programme information was very crucial. Despite the shortage of some resources, almost all HIV-positive pregnant women were satisfied with the counselling sessions and their counsellors. These women also found that information was important and necessary. The current study illustrates that HIV-positive pregnant women often look to Health Care Workers for information, answers, comfort, counselling and support. Help, health education and advice incorporates effective communication; education about how to live with HIV and with the child; and education about medication and diet.

Sub-category 2.2.1: Advices and communication are good

The participants reported that they were advised on ways to take care of themselves and their babies. One participant further reported that she was advised at the clinic that the ARVs would maximise the chances of the child being born without an HIV infection. It was of paramount importance that ARVs continue to be taken during pregnancy. Further ARV-related benefits included early ANC booking during pregnancy, conducting blood tests, getting ARVs on time, and delivering healthy babies. The participants indicated as follows:

“Ba [Badiri ba pholo] nthusa ka go nkakanyetsa gore ke nwe dithare. Ke ikamogetse the way ke leng ka teng. Ke emisiositse ka go inyatsa. Ga ke sa lebelela gore mang o tla reng. Ba nthusa ka go nthuta ka mogare o wa HIV.”
(BP5).

(“They [Health Care Workers] helped me by advising me to take the medication. I accept the way I am. I stopped undermining myself. I must not look and think who will say what. They helped me by educating me about this virus.”) (**BP5**).

“Ke thusitswe le go akanyetswa gore ke itlhokomele jang. Fa ke fetsa go belega ngwana ke tshwanetse ke mo fe masi a lebotlolo fela for six months kgotsa ke mo anyise fela for six months. Le gore ke ise ngwana tliniking ba mo testele PCR ka six weeks le ka one year six months gore a se ka a fetelwa ke mogare.” (**IP1**).

(“I was helped and advised on how to take care of myself. After I’ve delivered the child, I must feed him with bottle milk only for six months or only breastfeed him for six months. And that I must take the child to the clinic to do the tests (polymerase chain reaction (PCR)) after a period of six weeks, and also at one year and six months, for the child not be infected with a virus.”) (**IP1**).

“Badiri ba pholo ba re fa le di advises tsa go buka nako e sa ntse e leteng fa o le moimana. Fa o buka nako e sa ntse e le teng, ba go tsaya madi jaaka nako e ke ileng ka belega ngwana yo oneng a itekanetse.” (**IP2**).

(“The Health Care Workers also give us advice on how to make an appointment early when you are pregnant. If you come earlier, they do blood tests, like the time I delivered a healthy child.”) (**IP2**).

“Kgakollo e akaretsa go itse ka mefuta ya dijo gore go jewang le ka ga go nwa dipilisi ka nako sentle. Ke boledisane le baoki le dingaka ka nako ya counselling. Ba rile fa o le HIV-positive o tshwanetse go tla tliniking nako e sa ntse e le teng go re ngwana yo o mo imileng a nne le botshelo.” (**JP1**).

(“Advice includes knowing about the types of food to eat, and how to take the pills on time and correctly. I discussed with the nurses and the doctors during counselling sessions. They said that if you are HIV-positive, you must come to the clinic to be checked while there is still time for the unborn child to have life.”) (**JP1**).

Sub-category 2.2.2: Education about how to live with HIV and with the child

It emerged that education concerning HIV and the child was of importance. The participants desired strongly that their babies' birth be HIV-free. These participants mentioned that such education concerning HIV would be of immense benefit to those at home. One participant further stated that she would desire to be educated about unprotected sex and its attendant risks. This is evident from the statements such as:

"Ke batla badiri ba pholo ba nthute ka ga go tshela ka HIV le ngwana wa me. Ba mphe dikeletso tse di ntsi. Ngwana ga a tshwanelwa ke go tshwaetsega jaaka nna mmagwe ke tshwaetsegile. Maitemogelo a ka ka mogare wa HIV ke gore ke ne ke sa gopole gore nka nna le ngwana. Ke ne ka tla mo tliniking fela ba ikitsise gore ga go na molato, ngwana a ka nnetse a belegwa a se na HIV ka gonne ke nwa di ARVs. Ba ne ba re ke tswelele ka go nwa di ARVs ka gonne ke imile ke ntse ke dinwa. Ke di simolotse ka 2010. Ba rile gape di ARVs di ile go thibela mogare wa HIV gore o se ka wa fetela kwa ngwaneng. Se ke se batlang fela ke grore ngwana a belegwe ka pholo." **(BP3)**.

("I want [Health Care Workers] to teach me how to live with HIV along with my child. They must give me more advice in taking care of my child. He must be HIV negative because I, as his mother, am HIV-positive. My experience as a person who is infected by HIV...Mmm I didn't think of having a child since they told me that I am infected by HIV. I came to the clinic and they told me that there is no problem, as the child could be delivered without being HIV infected since I am using the ARVs, which are those pills that prevent the transfer of HIV virus from the mother to the child. I wanted to know if, as I am now taking the ARVs, the child won't contract HIV during the time of delivery. They told me that I must continue taking ARVs because I became pregnant while I was taking them. I started taking them in 2010. They said that the ARVs will prevent the child from being infected with HIV at the time of delivery and even at six weeks after delivery. What I only want is for the unborn child to be born healthy.") **(BP3)**.

"Ka yona sickie e, nka tlhoka go re ke bolellwe go re ke itlhokomele jang. Gantsi ga ke botswa go re ke itshireletsa jang, ke araba ka gore ke berekisa kgotlopo. Ke itshireletsa gore ke thibele malwetse a thobalano a a ka tlhagang." **(BP4)**.

(“About this disease, I would like to be advised on how to take care of myself. I am asked most often how I protect myself, and I answer by saying that I make use of a condom, protecting myself in order to prevent other sexually transmitted diseases from cropping up.”) **(BP4)**.

“Ba a re ruta gore re nne le kitso ya go ruta ba bangwe kwa gae. Ba re lemosa jaana gore le setshaba se tle se nne aware. Ba tshwanetse go re ruta ka thobalano e e sa sireletsegang le ditlamorago tse di ka nnang teng fa ke sa dirise kgotlopo mme fela ke nwa dipilisi ka nako eo.” **(JP3)**.

(“They educate us and that we must possess knowledge to educate others at home. They must notify us in this way (through health education) so that the nation in its entirety has to be aware. They must educate me about unprotected sex and which risks I am exposed to if I don’t make use of a condom but taking the pills at the same time.”) **(JP3)**.

Sub-category 2.2.3: Education about medication and diet

The participants mentioned baby feeding education as sacrosanct to them. For instance, they needed clarity on whether or not it was recommended to feed their babies with breast milk only for six months; or whether to feed them with only bottle/formula milk for six months. They further wished to know whether it was safe to breastfeed while HIV infected. They reported that the Health Care Workers educated them on taking medication on time, and proper diet. The following narratives were mentioned by different participants regarding education about diet and medication:

“Ke ne ke batla go itse gore go safe go amusa ngwana fa o tshwaetsegile ka mogare wa HIV. Ba rile re tshwanetse go amusa for six months, re tshwaetsegile kgotsa re sa tshwaetsega. Ba mpoleletse gore ke fepe ngwana ka dijo tse di boleta morago ga six months, fela ga kena bonneta ka seo.” **(JP2)**.

(“I wanted to know if it is safe when I breastfeed the child while I am HIV infected .They said we must breastfeed babies for six months, whether we are infected or not. They told me to feed him with soft food after six months, but I am not sure about that.”) **(JP2)**.

"Kgakollo e akaretsa go itse ka mefuta ya dijo gore go jewang le ka ga go nwa dipilisi ka nako sentle." **(JP1)**.

("Advice includes knowing about the types of food to eat, and how to take the pills on time and correctly.") **(JP1)**.

HIV-positive pregnant women need support and information in order to take ARV treatment during pregnancy (Du Bois 2007:10). Any efforts aimed at improving PMTCT uptake and adherence should begin with awareness and knowledge. Maputle and Jali (2008:45) contend that for PMTCT interventions to be effective, every individual woman, more so those of child bearing age, needs to be empowered and updated with knowledge concerning HIV infection, the associated risks of transmission to their children, as well as the available options that will help them counter the risk of HIV transmission to their child.

According to the study conducted in Madibeng Local Municipality between October and November 2008 among Lighthouse Foundation's target population in order to better understand the key factors promoting HIV transmission in the area, it was revealed that while most people (68%) mentioned antiretrovirals as the way to reduce MTCT of HIV, other ways of reducing this, including ways of safe infant feeding, were less known (at 1% for exclusive breastfeeding and less than 15% for replacement formula feeding). Bojanala District Municipality has been identified by the National Department of Health as one of the eighteen priority districts targeted to receive increased support in improving maternal, child and women's health and nutrition (Health and Development Africa:7). Women must have access to education and knowledge as well as being empowered to protect them from HIV (Bobb 2012:1).

4.6.3 Theme 3: Stressors about HIV status

Unfortunately, HIV-positive pregnant women in this study often do not learn they are infected with HIV until they are pregnant and are tested as part of their antenatal visit. Almost all the HIV-positive pregnant women did not come with their partners during the first ANC booking period although all health facilities of the sub-district offer couple HIV testing. Some of the HIV-positive pregnant women mentioned that they tested alone as

their partners were at work; whilst only one reported that the partner suggested that they test together because she was contracting diseases.

4.6.3.1 Category 3.1: Emotional affection as a result of contracting diseases

The HIV-positive pregnant women revealed increased negative emotional reactivity. Almost all of them reported to be contracting other diseases since they became HIV infected. They even related their fears of infecting their babies and the stress involved in having to wait to find out whether their babies would be HIV negative or not. Willingness to take the ARVs as prescribed by the Health Care Workers was also expressed, though side effects such as vomiting were also reported. The interviewees articulated felt emotions such as bad, offended, weakness, and heartbroken. The findings also revealed that there were still some HIV-positive pregnant women who hoped HIV could be cured. Some of them reported that they were using injection contraceptives for prevention, but still fell pregnant. They were not educated by the Health Care Workers that the ARVs were stronger in dose than the contraceptives.

Sub-category 3.1.1: Taking blood tests alone in the absence of the partner

With the exception of only few HIV-positive pregnant women; most reported that they went for testing alone because their partners were at work. This is evident from comments such as:

“Ga ke a ka ka dumela le go tlhaloganya gore selo se se ka diragala. Ga ya ka ya ntsaya sentle. Ke ile ka ba offended. CD4 count ya ka e ne e le 453. Ga ke itse gore fa ke se na go pepa go diragalang ka gonne ke tsaya dipilisi tsa TB le tsa HIV. Pelo ya me e ne e utlwile botlhoko ka gonne ke ka ke dira diteko ke le mongwe, molekane wa ka o ne a se teng a ile tirong.” (**BP1**).

(“I didn’t believe and understand that this type of thing could occur. I felt bad and offended. My CD4 count was 453. I don’t know what will happen after delivering because I am taking the TB and the HIV pills. My heart was broken because I conducted the tests while alone. My partner was not present as he was at work.”) (**BP1**).

“Ke dirile diteko tsa madi go tlhatlhoba HIV ke le mongwe ka gonne ke ne ke sa ikutlwé sentle.” (**JP1**).

(“I conducted blood tests for HIV alone because I was not feeling well.”) (**JP1**).

“Ke dirile diteko tsa HIV ke le nosi ga jaanong jaana ke mo kgwedding ya bosupa ke imile.” (**JP2**).

(“I did tests for HIV alone and now seven months pregnant.”) (**JP2**).

Sub-category 3.1.2: Feeling heartbroken

The participants indicated that they were heartbroken as result of their HIV-positive status, as a result of undergoing testing in the absence of their partners and also contracting HIV whilst on contraceptive injection. Participant further reported that they thought of committing abortions but were scared to implement the thoughts. The participants lamented that:

“Pelo ya me e ne e utlwile botlhoko. Ka kotsi ya go se itse gore fa o nwa di ARVs o ka ima ka gonne o tshwanetse go tlhaba two weeks before letlha la gago la go tlhaba injection ya thibela pelegi. Ke ne ke sa itse fa Depo Provera e le swak. Ke ne ke itse ka ga Nurstetratre. Ke ne ka nagana go dira abortion mme ka tshaba.” (**IP2**).

(“I was heartbroken. It is perilous to be unaware of the fact that if you take ARVs you could still get pregnant as a result of not administering injection two weeks before your pregnancy prevention date. I didn’t know that Depo Provera is weak. I only knew Nurstrate. I was thinking of doing abortion but then I became scared.”) (**IP2**).

“Ke ne ka botswa ka maikutlo a me fa ke fetsa go lemoga gore ke tshwaeditswe ke mogare wa HIV mme ka araba ka gore pelo ya me e utlwile botlhoko.” (**IP1**).

(“I was asked about my feelings after I found to be HIV-positive and replied by saying heartbroken.”) (**IP1**).

Sub-category 3.1.3: Feeling bad and offended

Some participants mentioned further that they felt bad about being HIV-positive. In spite of their status, these particular participants opted for treatment in order to protect their unborn children from infection. The following attest to the above:

“Kgang e, e ne ya se ntseye sentle fela ke ile ka lemoga gore ke simolole go nwa melemo ka tshwanelo gore ngwana wa me a sa tshwaetsega. Ke bone gore go inyatsa go tlie go koafatsa bonneta ka ga me.” **(BP5)**.

(“I felt bad about this issue, but I realised that I should start taking my treatment so that my child must not be infected. Undermining me could weaken the belief in my true self.”) **(BP5)**.

“Bokoa ba go inyatsa ka gonu ke le mosadi wa moimana yo o HIV-positive go a nkopisa ka nnene.”) **(JP1)**.

(“Weakness of undermining myself because of being HIV-positive pregnant woman offended me really.”) **(JP1)**.

Sub-category 3.1.4: Taking ARVs and TB treatment

Two of the participants mentioned that they were taking the ARVs and one taking both ARVs and TB treatment. One further reported that she had chest problems which were undetected by the tests until the X-ray detected the TB disease. This was alluded to by the participants:

“E rile fa monna wa me a se na go tlhokafala, ka iponna yo mongwe [monna]. Ka tshwarwa ke malwetse a mangwe. A bo a re re ye go dira diteko. Ke ne ke sa itse ebile ke sa tlhaloganye go re go diragalang. Re ne ra ya kwa tliliniking ya Rusternburg. Ke ne gape ka tlhatlhobelwa TB ka gonu ke ne ke lemogile fa ke na le bothata jwa mafatlha. Dithlatlhobo di ne tsa dirwa mo kgareng ya me, fela ga di ka tsa bontsha bolwetse jwa mafatlha, e mpa X-ray e ile ya bontsha fa ke na leTB.” **(BP2)**.

(“After my husband had died, I found myself another one [husband]. I then contracted other diseases. He then said that we go for tests. I didn’t know and

even understand what was going on. We went to the clinic in Rustenburg. I again tested for TB because I realised that I had a chest problem. Tests were conducted on my chest, but they didn't show any TB sickness, but the X-ray showed that I had TB.”) (**BP2**).

“Se nka go tlottlelang sona... go a kgonagala gore fa ke na le HIV e thibelwe gore e nyelele gotlhe? Kgotsa fa ke na le masole a mmele a a kwa godimo ga gona gore nka fiwa setlhare sa go e nyeletsa totally. Nkabo go kgonagala gore fa e thoma jaana o fiwe molemo o e nyeletsang. Di ARVs di thusa fela gore e se ka ya ata.” (**BP4**).

(“What I could tell you ... is it possible that the HIV I have contracted could be prevented and go away forever? Or if I've got more antibodies, is there no other way that I could be provided with medication that could wipe it away forever. The ARVs only help to lessen the disease's intensity.”) (**BP4**).

“Nna ka bona, thuso e tshwanetse ya nna ka diplisi tsa go thibela HIV. Ngwana yo ke mo imileng ga a tshwanelo go nna mo kotsing”. (**JP3**).

(“For me, assistance must be in the form of HIV prevention pills. The unborn child must not be in danger”.) (**JP3**).

Sub-category 3.1.5: ARVs stronger in dose than contraceptives

The participants mentioned that they didn't know that Depo Provera was weak. They only knew about Nurstrate. They also reported that it was dangerous for them to be unaware that if they took the ARVs they could be pregnant because they had to receive the injection for pregnancy prevention two weeks prior to their appointment dates. The participants voiced that:

“Pelo ya me e ne e utlwile botlhoko. Ka kotsi ya go se itse gore fa o nwa di ARVs o ka ima ka gonno o tshwanetse go tlhaba two weeks before letlha la gago la go tlhaba injection ya thibela pelegi. Ke ne ke sa itse fa Depo Provera e le swak. Ke ne ke itse ka ga Nurstetratate. Ke ne ka nagana go dira abortion mme ka tshaba.” (**IP2**).

(“I was heartbroken. It is perilous to be unaware of the fact that if you take ARVs you could still get pregnant as a result of not administering injection two weeks before your pregnancy prevention date. I didn’t know that Depo provera is weak. I only knew Nurstrate. I was thinking of doing abortion but then I became scared.”) **(IP2).**

“ Di ARVs di matla go feta dithibela pelegi gape di dira gore HIV e se ka ya ata go ya pele.” **(BP4).**

(“The ARVs are stronger than the contraceptives and they make the HIV not to multiply further.”) **(BP4).**

Sub-category 3.1 6: Side effects of ARVs such as vomiting and dizziness

The participants reported ARV side effects such as vomiting and dizziness. They further indicated that they needed to be helped, checked and given proper medication when they are sick, as they were not supposed to take any type of medication when they use ARVs. The following views and statements emerged from the participants:

“Ka dinako tse dingwe re a dikwella. Re a tlhatsa. Ke eletsa o ka re ba ka re thusa ka bonako.” **(JP1).**

(“Sometimes we become dizzy. We vomit. I wish they help us quickly.”) **(JP1).**

“Ke ne ke sa tlhaloganye gore go diragalang. Ke ne ke tlhatsa. Ba mpoleletse gore ke matshwao a boimana.” **(JP2).**

(“I didn’t understand what was going on. I was also vomiting. They told me that those were the symptoms of pregnancy.”) **(JP2).**

“Motho are thus (Motsayakarolo a nyeba). Fa o lwala o fiwe melemo e maleba ka gonu ga re a tshwanelo go nwa melemo e mengwe le e mengwe fa re nwa di ARVs. Sometimes re tshwarwa ke flu, like gona jaanong ke tswa go reka ditlhare. E ne gape ke nwa di ARVs.” **(BP2).**

(“Someone must help us (Participant smilling). When you are sick you must be given proper medication, since we are not supposed to take any type of

medication when we use the ARVs. Sometimes we suffer from flu. I've just bought [flu] medication. I am also taking the ARVs.") (**BP2**).

When a pregnant HIV-infected woman receives adequate medical care early and takes antiviral medications regularly during her pregnancy, the chance that she will transmit HIV to her unborn child is dramatically reduced. It is important that any HIV-positive pregnant woman begins pre-natal care as soon as possible in order to take full advantage of such availability of treatment. The sooner a mother receives treatment, the greater the likelihood that her child will not be HIV-infected. Before the birth of her child, antiviral treatments administered on the mother during pregnancy could help prevent HIV transmission to the child. At the time of birth, antiviral medications could be given to both the mother and the new-born child to lower the risk of HIV transmission that could occur during the birth process (which exposes the new-born child to the mother's blood and fluids) (Dowshen-Atanda 2012:2).

4.6.4 Theme 4: Lack of and shortage of resources

The findings of this study revealed that there was numerically an inadequate number and categories of Health Care Workers. Heavy workloads resulted in HIV-positive pregnant women being inadequately attended to because of staff shortages. The need for adequate numbers and the right mix of Health Care Workers, as well as working space, emerged as other prohibitive factors for availing and accessing the PMTCT programme.

4.6.4.1 Category 4.1: Long waiting periods and busyness of the nurses

Some of the interviewed participants (HIV-positive pregnant women) expressed dissatisfaction with the existing services of the PMTCT programme they were receiving. Long waiting periods and busyness of nurses were reported as the results of few staff members. As a result, little time was available to perform assigned activities of the PMTCT programme. Workloads have increased through the growing demand for PMTCT programme such as counselling and testing services; prevention and treatment of opportunistic infections; and helping pregnant women in the maternity sections to give birth. Ensuring that a sufficient number of staff is assigned to HIV-positive pregnant women for service provision was also raised as a concern. Long waiting periods (and

the consequence of spending the whole day at the facility and returned home without receiving help) was a manifestation of poor health services delivery standards and low staff morale.

Sub-category 4.1.1: Shortage of staff

The short supply of Health Care Workers adversely affected the standard of PMTCT programme and capacity of the clinics. There has been an increase in the programme addressing the HIV/AIDS epidemic, but the number of nurses has not been increased. For example, the participants indicated that:

“Re tla mo mesong fela re fetsa thari ka bo sethoboloko. Ga ke itse gore ke go tlhaela ga badidri kgotsa jang”. **(JP2).**

(“We come early in the morning and finish at midday. I don’t know whether there is a shortage of staff or not.”) **(JP2).**

“Baoki ba tlhaela gape ba phela ba le busy, ba dira thata. Re nna le go leta for nako e telele morago re be re bolellwa gore re tle ka moso re sa tlhatlhobiwa.” **(BP2).**

(“Nurses are short staffed and always busy, having too much to do. We sit and wait for long time and thereafter told to come tomorrow without being checked.”) **(BP2).**

Sub-category 4.1.2: Services poor and of low standards

Services were reported to be of poor and low standards. Most of the HIV-positive pregnant women felt frustrated because of the shortfalls in PMTCT programme services delivery. The latter was ostensibly beyond the control of the Health Care Workers. The participants again said that:

“Ke fitlhela ditirelo tse di le bokoa ebile e le tsa maemo a a kwa tlase.” **(JP2).**

(“I find the services to be poor and of a low standard.”) **(JP2).**

“Wa bona go amogela ditirelo tse di mpe tsa go busetswa morago o sa thusiwa go a re frustraita rona baimana ba ba tshwaeditsweng ke mogare wa HIV.” **(BP2).**

(“You see receiving bad services of being returned back without receiving any help frustrates us as HIV-positive pregnant women.”) **(BP2).**

Sub-category 4.1.3: Spending the whole day at the health facility

The findings also revealed that the HIV-positive pregnant women spent the whole day at the health facilities. Nurses have to make amends for staff shortages and work hours due to the growing demand for PMTCT services. The participants voiced further that:

“Re tlhola motshegare otlhe fa, ga ke itse gore ke ka ntlha ya mola kgotsa jang. Ke fitlha ka bo six mo mesong mme ke boela gae ka bo two ya mantsiboa.” **(JP2).**

(“We spend the whole day here; I don’t know whether it is because of the queue or what. I arrive at about six in the morning and go back home at about two in the afternoon.”) **(JP2).**

“Baoki ba phela ba le busy. O tla mo tliniking ka bo six mesong mme o boela gae ka morago ga one afternoon.”) **(BP2.)**

(“Nurses are always busy. You come to the clinic at six in the morning, but return home after one in the afternoon.”) **(BP2.)**

Sub-category 4.1.4: Returned home without receiving help

The participant reported that they were sometimes returned home without being attended to, and told to come back the following day. Delays in obtaining blood results (which hinders ART initiation) were also reported. These negative experiences at health clinics engendered a sense of frustration from the pregnant HIV-positive women. Following are some of the narratives from the HIV-positive pregnant woman depicting her frustrations:

"Maitemogelo a tlhokomelo mo maternity ke gore ba re tshwere sharp, kwa ntle le fa go na le batho b aba tlo belegang. O tla fitlhela ka letsatsi leo ba nang le mmereko o montsi ba re bolella gore re tle ka moso. Baoki ba phela bale busy re nna le go leta sebaka. Ke eletsa o kare go kanna le motho yo berekang straight ka baimana. Wa bona like mo baimaneng re utlwa botlhoko fa re busetswa morago gae re sa thusiwa. Go diriwa di teste for six months mo tliniking e, gape ke maikarabelo a gago go botsa ka dipoelo. Ga go tshwane le kwa ke neng ke tsaya treatment pele." **(BP2)**.

("My experience with care in the maternity section is that they treat us very well, except when there are people coming to deliver babies. When they have too much to do on that day, they tell us to come the following day. Nurses are always busy and we sit and wait for a long time. I ask that there should always be a person working specifically with pregnant women. You see, when coming to pregnant women, we feel pain when we are sent back home without receiving any help. They conduct tests for a period of six months here in this facility and it is your responsibility to ask for blood test results. It is not like the place where I initially took my treatment.") **(BP2)**.

Pregnant HIV-infected women were identified as a priority group. Despite the availability of key resources and medications, antiretroviral treatment rates for pregnant women in South Africa remained low (Ngidi, Reddy, Luvuno, Rollins, Baker & Mate 2013:133). South Africa has the potential to save a substantial number of mothers' and children's lives and, although there are some critical shortages of staff and resources – especially in the poorest rural areas – the challenge is to improve the quality and productivity of existing resources. HIV/Aids are the most important causes of the excess maternal and infant deaths in South Africa, and scaling up HIV interventions for women and children is a priority (Karim, Churchyard & Lawn 2009:757).

In order to achieve wide coverage, PMTCT programmes must be integrated into existing public health systems, with services provided by all antenatal and delivery clinics. So far, only a few low and middle-income countries have achieved this goal. One reason given for the slow progress is that most health systems are poorly resourced: clinics are struggling to provide conventional services, let alone new ones (WHO/UNAIDS/UNICEF 2011:1).

Findings from South Africa illustrate that PMTCT programmes are often integrated into healthcare systems that are already understaffed and over-pressurised, and as a result there are delays in aspects of implementation and in the training process (Skinner, Mfecane, Gumede, Henda & Davids 2005:115). The findings of a study conducted in South Africa HIV-positive pregnant women who began ART just prior to childbirth, made optimal prevention and treatment outcomes less likely (Sprague et al 2011:9). This is due to consistent delay for HIV-positive pregnant women receiving their CD4 cell count results late.

Kgautle (2009:6) reports that lack of nursing staff is a contributory factor to the non-functioning clinics such as Jonathan and Kwarrie Kraal in Madibeng sub-district. People suffer because of the delays in opening the clinics. Tebogo Lekgethwane, spokesperson for the North West Health Department, agrees that the clinics are not functional. He says budget constraints prevent the department from hiring professional nurses and other medical personnel for the clinics. Since then, the government is still in the process of resolving the matter.

4.6.4.2 Category 4.2: Layout and size of facility

The findings revealed that the health care facilities were small, despite the existence and utilisation of the park homes as extra consultation rooms in the three clusters of the Health sub-district. Consulting rooms were insufficient, and parking sites were used for the support groups. The utilisation of the parking sites was discontinued due to a lack of privacy to which HIV-positive pregnant women were exposed. Layout and size of a facility also determine the extent to which a pregnant woman could be attended separately without compromising her privacy. Furthermore, small clinics could not cater for bigger numbers of patient visits. Many maternity side deliveries necessitate adequate personnel to facilitate maternity child births.

Sub-category 4.2.1: Pregnant women not attended to separately

HIV-positive pregnant women reported that they were not attended to separately during ANC. They were treated in the same consultation rooms with the other patients. The nurses were understaffed and the consulting rooms were also not enough. The participants mentioned that:

“Nna ka bona ke eletsa o ka re ba ka bo ba re atenda re le nosi rona baimana kagonne o tla mo ka bo six o be o boela gae ka bo one. Ke kopa fela gore go nne le motho yo o dirang ka baimana.” (**BP2**).

(“I for one wish that they attend to us separately because you came here at about six o’clock and go home at one o’clock. I ask that there should always be a person working specifically with pregnant women.”) (**BP2**).

“Badiri ba pholo ba ba dirang ka go belegisa ke bona ba ba re tlhatlhobang ka mo di phaposing tsa go thoba maikutlo tse re di aroganang le balwetse ba bangwe ka gonue diphasopi di tlhaela.” (**JP9**).

(“The very same Health Care Workers who work in the maternity sections are the ones who attend to us in the same counselling rooms that we share with other patients because the rooms are not enough.”) (**JP9**).

Sub-category 4.2.2: Maternity side deliveries are many

The participants mentioned that in maternity side wards, nurses were always busy because of many deliveries. The nurses attended to the pregnant women in labour pains first and later to ANC ones. They further reported that the nurses’ busyness resulted in patients being told to come the following day, which caused anguish. The participants expressed these concerns:

“Fa bona [baoki] ba na le tiro e ntsi mo letsatsing, ba re bolella gore re tle ka moso. Baoki ba phela bale busy, le leta le go ema sebaka. O tla mo mesong mme o boela gae mantsiboa. Ke kopa le go eletsa fa go ka nna le motho yo o dirang ka baimana fela a sa belegise. Wa bona fa go tla mo baimaneng re utlwa bothoko fa re sa thusega mme re busetswa morago.” (**BP2**).

(“When they [nurses] have too much to do on that day, they tell us to come the next day. Nurses are always busy and we sit and wait for a long time. I wish that they attend to us because you come here at about six o’clock [in the morning], and go home at one o’clock [in the afternoon]. I request that there should always be a person assigned to work specifically with pregnant women. You see, when it

comes to pregnant women, we feel pain when we are sent back home without receiving any help.") (**BP2**).

"Re tlhola motshegare o tlhe fa gape ke eletsa o kare baimana ba tlhatlhobelwe kgakala le diphaposi tsa go belegisa ka gonne ga re thusiwe go lebeletswe pele ba ba belegang." (**JP9**).

("We spent the whole day here and I wish the pregnant women who came for ANC check-up be treated far away from the delivery rooms because we are left unattended and priority is given to delivering ones.") (**JP9**).

Sub-category 4.2.3: Small clinic size

Some participants mentioned that the clinics were too small to accommodate the HIV-positive pregnant women. Parking areas and park homes were erected at other health care facilities of the three clusters such as at I cluster, but no longer in use as a result of lack of privacy. Some HIV-positive pregnant women mentioned that:

"Ke eletsa fa baimana ba ka nna lethakoreng le le lengwe, ka gonne tliliniki e nnye. Ka dinako tse dingwe re a dikwella, re a tlhatsa, ke eletsa fa re ka thuswa ka potlako." (**JP2**).

("I want pregnant women to be on one side, the clinic is too small. Sometimes we become dizzy, we vomit, I wish they help us quickly".) (**JP2**).

"Kgang ya go thusiwa kwa go emang dikoloi tsa badiri ba pholo le kwa di park homes ka ntlha ya ditliniki tse di nnye ga e a siama gotlhelele.") (**IP2**).

("The issue of being attended in the parking areas and park homes because of small clinics is not good at all.") (**IP2**).

Studies conducted in Uganda and Kenya revealed that shortage of counselling space was among the reasons leading to loss of PMTCT programme clients. The constraints led to long waiting periods and some women left without receiving their HIV test results. The constraints also compromised privacy and confidentiality of mothers. Similar findings were also found in Kenya, where 92% of respondents lacked privacy in

counselling rooms, as indicated by the presence of more than two people in the room (Fatch & Zgambo 2012:3).

Although some improvements in infrastructure may be required, there is abundant evidence that PMTCT programmes are feasible even in the poorest parts of the world (WHO/UNAIDS/UNICEF 2011:1). Interventions are cost effective and deserve to be seen as a necessary part of maternal and child health care (UNICEF 2003:1; Scotland, Van Teijlingen, Van der Pol & Smith 2003:1045). The latter view is corroborated by Scotland et al (2003:1045), who contends that: "Should infrastructural improvements be necessary, the cost of these should be considered in the wider context of all potential benefits to other health care areas. Thus the mobilising of resources for MTCT prevention programmes should be seen as a catalyst for improving other areas of maternal and child health, and other areas of primary HIV prevention".

4.6.5 Theme 5: Support by health care professionals and family

This theme mainly addressed the extent of observable support provided by both the Health Care Professionals and families to the HIV-positive pregnant women in the health sub-district. In this study, the participants revealed a positive attitude with regard to support by Health Care Professionals and family. HIV-positive pregnant women's status has an adverse impact on their lives. However, their willingness and ability to seek the PMTCT programme services were not affected as a result of support by both the Health Care Professionals and family. For effective HIV prevention, women who test HIV negative should be supported and encouraged to remain negative.

4.6.5.1 Category 5.1: Satisfactory health care services offered by health care professionals

The findings showed the Health Care Workers' seemingly overwhelming workload and working conditions did not always prevent them from offering commendable assistance to HIV-positive pregnant women enrolled on the PMTCT programme. The Health Care Workers play a critical support role for HIV-positive pregnant women in this study as they knew their patients status and offered support and guidance about complex challenges facing these HIV-positive pregnant women. On the other hand, the HIV-positive pregnant women also appreciate the good health care services offered to them,

such as HIV counselling; ARV provision to prevent the child from infection; adhering to prescribed ARVs; and satisfactory services in ensuring that they are seen by a doctor.

Sub-category 5.1.1: HIV Counselling done and not stressing

The participants reported that HIV counselling and testing was conducted with ease. The blood tests were conducted to check the CD4 count and viral loads. The Health Care Professionals spoke very cordially to the patients, and with no condescending or contemptible attitude. The participants commented that:

“Ke ne ka diriwa thobo ya maikutlo pele madi a me a tthatlobelwa mogare wa HIV le pele ke simolola go nwa ARVs.” (**IP6**).

(“I was counselled before my blood was tested for HIV and even before I started with the ARVs.”) (**IP6**).

“Ba nthusitse gore ke amogelete go tshwaetsega ke mogare wa HIV ka go thobiwa maikutlo pele le morago ga diteko.” (**JP3**).

(“They helped me to establish my HIV status through pre and post test counselling sessions.”) (**JP3**).

Sub-category 5.1.2: ARVs provided to prevent the child from HIV infection

The participants mentioned that the ARVs were provided to them in order to prevent the babies from HIV infection. Proper explanation was also provided on the correct in-take of ARVs as prescribed. This is supported by the statements such as:

“Ba mphile dipilisi [ARVs]. Ba ile ba ntsaya le madi go tthatlhoba CD4 count le viral load. Se ke se boneng gompieno, ba ne ntihokometse tota. Ba ne gape ba le bonolo mo go nna.” (**JP3**).

(“They also gave me pills [ARVs]. They also conducted blood tests to check the CD4 count and viral loads. According to what I saw today, I noticed that they paid attention. They were taking care of me, and were also patient with me.”) (**JP3**).

“Okay, ka tshedimosetso ya go amusa ngwana letsele fela for six months le go nwa di ARVs, ke ithutile gore ngwana o ile go sireletseg.” (**BP1**).

(“Okay, with the information of breastfeeding the baby exclusively for six months and by taking the ARVs, I learnt that the baby will be safe.”) (**BP1**).

Sub-category 5.1.3: Adhering to prescribed treatment

The participants indicated that they adhered to the prescribed treatment, and that the nurses also took satisfactory care of them. They even indicated that the treatment helped them because some were vomiting and couldn’t eat before. Some participants stated that:

“Fa e sale ke simolotse treatment fa setheong se ka 2011, baoki ba bonolo mo bathong [baimana] gape ba itse le go bua le balwetse.” (**BP3**).

(“Since I started treatment at this facility in 2011, the nursing sisters are patient with people [pregnant women] and they also know how to relate to patients.”) (**BP3**).

“Ba nthusa ka treatment ka gonu pele ke ne ke sa kgone go ja. Ke ne ke tlhatsa. Ba mphile di ARVs le dipilisi tsa boimana.” (**JP2**).

(“They help me with the treatment because I couldn’t eat before. I was vomiting. They provided me with ARV pills and the pills for pregnancy.”) (**JP2**).

Sub-category 5.1.4: Services satisfactory and give life

The findings serve to confirm that the HIV-positive pregnant women reported that they appreciated the PMTCT programme services. They also mentioned that the services were helpful and safe. Some participants indicated that:

“Baoki ba mpha dipilisi ka gonu di tlile go seifa ngwana le maphelo a rona. (Motsayakarolo a nyeba). B a kopa gore re di nwe ka mokgwa o re laetsweng ka teng, Ba treata balwetse sharp, gab a re kgese. Ditirelo di a thusa ebile di babalesegile. Ka mantswe a mangwe ditirelo di a kgotsofatsa.” (**BP1**).

(“Nurses supply me with pills because they [pills] will save the child as well as our lives (Participant smiling). They plead with us to take the pills as prescribed. They treat the patients properly. They don’t harass us. I realised that the services were helpful and safe. In other words their services are satisfactory.”) (**BP1**).

“Ditirelo di siame kwa ntle fela fa go na batho ba batlo belegang bana. (Motsayakarolo a nyeba). Ba re tsaya sentle fela. Ba tlhokomela bolwetse ba ba re fa ditlhare.” (**BP2**).

(“The services are very good, except when there are people coming to have babies. (Participant smiling). They are just treating us well. They take care of the sickness and provide us with treatment.”) (**BP2**).

“Maitemogelo a ka mo setheong se sa pholo ke go re badiri ba pholo ba a re tlhokomela ka gonne ba bua sentle le rona. Ga ba re nyonye. Ditirelo di a kgotsofatsa. O fitlhela melemo fa. Ga melemo e se teng, ba founela kgemisi ya sepetlela, ba bo ba ba kwalela lekwalo la gore o ye go tsaya melemo.” (**IP1**).

(“My experience in I cluster is that Health Care Workers take good care of us because they talk to us politely. They don’t despise us. Services are satisfactory. You always find medication here. If they are out of stock, they call the sub-district Pharmacy, and they also write to them to give you the necessary medication.”) (**IP1**).

Sub-category 5.1.5: Nursing staff caring with patients

The positive experiences mentioned by the HIV-positive pregnant women were that nursing staff were patient with them, and spoke professionally with the patients and did not subject them to harassment. Some participants articulated their experiences thus:

“Ditirelo tse di leng fano fa ke tse di siameng. Ai di ... (motsayakarolo a didimalala go se ne ne). Ke ditirelo tse ke boneng di siame like tlhokomelo e ba mphang yona.” (**BP5**).

(“They take care of me properly. They provide support. Services here are excellent, just like the care they provide me with.”) (**BP5**).

"Badiri ba re tlhokomela pila ga ba lemoga gore re nwa di ARVs sentle. Re tlhokomelesegile. Ba re rotloetsa gore re kgone go bua le mang le mangy o o re thusang jang kapa jang." (**IP2**).

("Employees talk properly with us and they explain properly on how to take the ARVs. We are well taken care of us when they see that we take our ARVs. They emphasise that you could talk to anyone who helps you.") (**IP2**).

"Ba ncinka e bo ba cheka le ngwana gore o ntse pila, wa tshameka, ba bo ba mpotsa gore bothata bo fa kae jaaka ke le miomana mme morago ba mphe dipilisi. Ga ke tsena mo tliliniking ke isa karata ba bao ba mpatlela file. G e kereyeng key a go chekiwa ke sista for malwetse a a kannang le ona jaaka TB, Tshukiri, High Blood le Mafatlha." (**JP1**).

("They check me, check for the position of the unborn child whether he is playing or not, and also ask me specifically where the problem is as a pregnant woman, and give me pills. When I arrive at the clinic, I hand in the card and they immediately look for my file. After obtaining it, I'm checked by a nursing sister for sicknesses such as TB, Sugar Diabetes, High Blood Pressure and Asthma.") (**JP1**).

Sub-category 5.1.6: Seen by the doctor

The participants further reported that they were able to be physically examined by the doctor. In the event that the doctor was not available, they were told to wait and be admitted. The participants remarked that:

"Ba ntirela sengwe le sengwe. Le fa ngaka e se teng, ba re ke emenyane. Morago ba bo ba nkitsise fa ngaka e tsile. Fa ke ntse ke letile ba cheka nn le ngwana yo ke mo imileng. Ba mpha tlhokomelo e ntle. Fa ke ngongorega ka pain ba nthusa ka ponyo ya leitlho. Ga ba nke ba nna ba sa go thuse, ebile ga ba tseye lobaka. Ba rile ba tlile go cheka ngwana le go dira gore a se ka a fetelwa ke mogare fa ke pep le six weeks morago ga pelegi. Se ke se batlang fela ke gore ngwana a belegwe a phedile sentle". (**BP3**).

("They do everything for me. Even if the doctor is not available, they tell you to wait a little and admit you. Thereafter they tell you when the doctor will be

available. Meanwhile they check me and my unborn child. They provide me with good care. When I complain about a pain they provide care within a wink of an eye. They couldn't just stay without attending to you, they even don't take long. They said that they will check and prevent the child from being infected with HIV at the time of delivery and even at six weeks after delivery. What I only want is for the unborn child to be delivered healthy.") (**BP3**).

"Ditirelo tsa ngaka di teng, re tlhatlhobiwa ke ngaka. A ke go reye ke re ka nneta ba a re thusa mo tliliniking e [Mosayakarolo a nyeba]. Re fiwa le melemo ga re lwala. Ke lemogile gore fa ke lwala ke kopa thuso, ke a e newa. Ke bonwa gape le ke ngaka." (**BP4**).

("Services from the doctor, we are being examined by the doctor. Let me tell you that they really help us here at the clinic [Participant smiling]. They provide us with medicine whenever we are sick. I noticed that whenever I'm sick and seek help, they give it to me. I even get to be checked by a doctor.") (**BP4**).

To reach the target of eliminating new child infections and keeping their mothers alive, it is critical to protect the sexual and reproductive health and rights of all women living with HIV. These include their right to access voluntary and confidential HIV counselling, accurate and non-judgemental information, quality treatment and to bear children in a free environment, free of stigma and discrimination (Bobb 2012:29).

4.6.5.2 Category 5.2: Family support

The findings in this category indicated that family support engenders support to the HIV-positive pregnant woman. Participants reported that they disclosed their HIV status to family, children and partners. This resulted in the encouragement of others at home to test for HIV.

Sub-category 5.2.1: Disclosure to partner, children and family

The participants reported that they were supported by their family, partner, and children – to whom they also disclosed their HIV status. Furthermore, the participants reported that they tested together with their partners, and their CD4 counts have even increased. The participants commented that:

“Ga jaanong jaana, ke repile ka gonne ke boleletse botlhe ba losika le molekane wa me yo re dirirleng diteko mmogo. CD4 count ya me e nameletse go tswa go 220 go ya go 280. Molekane wa me ga aka a nna le bothata le seo.” **(IP2)**.

(“At the moment, I am feeling relaxed because I informed all the members of the family, including my partner with whom we tested together. My CD4 count has risen from 220 to 280. My partner didn’t have a problem with that.”) **(IP2)**.

“Ke ne ke se sharp, monna wa me a le sharp, CD4 count e le kwa godimo le viral load e le kwa tlase. Dr on a nkgakolola gore ke tsewlele ka go nwa di ARVs. Morago ga nako, ka testa gape mme dipholo tsa tlhaga e le CD4 e e kwa godimo le viral oad e e kwa tlase.” **(BP2)**.

(“I was not fine, but my husband was fine, his CD4 count was high and viral load was low. The doctor advised me to continue taking the ARVs. After some time I re-tested and my results came out with CD4 count high and viral load being low.”) **(BP2)**.

Sub-category 5.2.2: Encouragement of others to test for HIV

Participants mentioned that the disclosure of their status to the family was a catalytic reinforcement to encourage others at home to undergo HIV testing. The participants reported that:

“Kwa gae mme o nthotloetsa gore ke rotloetse ba bangwe go dira diteko.” **(IP2)**.

(“At home my mother encourages me to encourage others to undergo testing.”) **(IP2)**.

“Ke ile ka rotloetsa molekane wa me yo moncha gore re dire diteko mmogo mme o ne a dumela. Ga jaanong jaana re nwa di ARVs mmogo.” **(BP2)**.

(“I encouraged my new partner to test together with me and he agreed. Now we are taking the ARVs together.”) **(BP2)**.

Sub-category 5.2.3: Reminded to take the ARVs

Furthermore, the participants indicated that their children reminded them to take the ARVs on time, which was a positive factor that influences PMTCT programme's availability and accessibility. The participants mentioned that:

“Bana ba me ba itse, ebole ke bona ba nkgopotsang fa e le nako ya go nwa dipilisi.” (**IP2**).

(“My children know also, they are the ones who reminded me about the time to take the pills.”) (**IP2**).

“Ba nkgopotsa ka nako ya go nwa di ARVs, ka gonke ka nnete ruri bana ba me ba batla ke nwa di ARVs jaaka ke laetswe.” (**BP2**).

(“They reminded me about the time of taking the ARVs, because truly speaking my kids wanted me to take ARV treatment as prescribed.”) (**BP2**).

An HIV-positive pregnant mother who has not disclosed her diagnosis to her partner, family or friends is generally less likely to even accept preventive drugs and consequently practice unconventional methods of infant feeding. This is based on the fear of revealing that she was HIV infected. It is therefore imperative to involve male partners as well in PMTCT programmes. If couples are counselled and tested together, and the family is made aware of their situation, then there is less likelihood for blame and accusations. With the help of counsellors, the man's responsibility for protecting his partner's and family's health could be enhanced, which assists uptake of the PMTCT programme and other related services (Semraua, Kuhnb, Kasnded, Sinkalac, Kankasad, Shutese, Aldrovandif & Thea 2005:603).

Kalembo and Zgambo (2012:5) further reported that males and community involvement have been found to provide psychological support and eventually improving retention of clients in PMTCT programmes. HIV needs to be treated as a family sickness. Offering HIV testing and treatment to other family members could make the mothers easily accept to do their own HIV testing, collect results, adhere to PMTCT regimens, and also demystify issues related to disclosure; thus reducing the chances of spreading the virus further to either their partners or/and children. It could therefore be argued that family-

focused approaches do facilitate broader implementation and penetration of PMTCT programming, addressing the comprehensive needs of mothers, particularly those in need of treatment for their own health, as well as of children and other family members.

4.7 DISCUSSION OF MAIN THEMES (HEALTH CARE WORKERS)

During the data analysis of the FGDs and their transcripts, five main themes emerged from the findings based on the researcher's engagements with the Health Care Workers:

- (1) Fear of disclosure by HIV-positive pregnant women
- (2) Child feeding
- (3) Formal trainings and workshops on the PMTCT programme
- (4) Lack of and shortage of resources
- (5) Loss to follow-up

Following below is an overview of themes, categories and sub-categories identified in the data analysis of the Health Care Workers' transcripts.

Table 4.5 Overview of themes, categories and sub-categories of Health Care Workers

THEMES	CATEGORIES	SUB-CATEGORIES
1 Fear of disclosure by HIV-positive pregnant women	1.1 Non-disclosure due to stigmatisation	1.1.1 Continuously changing health care facilities 1.1.2 Moving from one country to another 1.1.1 Delays and interruption of treatment 1.1.2 Delays in ANC bookings 1.1.3 Fear of rejection by partner and family 1.1.4 Isolation by parents, family and community
2 Child feeding	2.1 Child feeding challenges 2.2 Lack of knowledge with regard to child feeding	2.1.1 Mixed feeding by the mothers and the child sitters 2.1.2 Babies becoming sick as a result of mixed feeding 2.2.1 Exclusive breastfeeding for six months 2.2.2 Discontinuation of breastfeeding before six months 2.2.3 Exclusive formula feeding for six months 2.2.4 Discontinuation of formula feeding before six months
3 Formal in-service trainings and workshops on the PMTCT programme	3.1 Lack of PMTCT programme knowledge	3.1.1 Lack of support by the health sub-district management 3.1.2 Insufficient facilitators' knowledge concerning the PMTCT programme
4 Lack and shortage of resources	4.1 Shortage of staff and medication 4.2 Layout and size of facility	4.1.1 Shortage of staff 4.1.2 Shortage of medication-ARVs 4.2.1 Insufficient Consulting rooms, 4.2.2 No privacy in parking areas and park homes
5 Loss to follow-up	5.1 Unstable HIV-positive pregnant women	5.1.1 Discontinued home visits, and door to door campaigns 5.1.2 HIV-positive pregnant women not returning for

THEMES	CATEGORIES	SUB-CATEGORIES
	5.2 Transport problems	ANC follow-ups 5.1.3 HIV-positive pregnant women returning to the clinics during delivery time 5.1.4 Babies not returned for PCR at six weeks post delivery 5.2.1 Health Care Workers' use of own transport 5.2.2 HIV-positive pregnant women's usage of public transport and family transport

4.8 THEMES, CATEGORIES AND SUB-CATEGORIES ACCRUING FROM HEALTH CARE WORKERS' DATA ANALYSIS

The following sub-section specifically addresses the themes, categories, and sub-categories accruing from the Health Care Workers' data analysis.

4.8.1 Theme 1: Fear of disclosure by HIV-positive pregnant women

Stigmatisation was identified as the main reason for non-disclosure. HIV-related stigma was reported by the Health Care Workers as the lead cause to social isolation, according to which the HIV-positive pregnant women desist from disclosing to their partners and families. The integration of PMTCT services into routine care was highlighted as an important aspect for reducing both stigmatisation and isolation.

4.8.1.1 Category 1.1: Non-disclosure due to stigmatisation

The findings revealed that some HIV-positive pregnant women refuse to accept their HIV reactive results. They change clinics continuously, migrate around the neighbouring countries, book late for ANC, diagnosed during delivery and still do not disclose. The affected participants mentioned that they did not disclose their status as they feared being ostracised or disowned by their families and in-laws due to stigmatisation. These obstacles resulted in interruptions in their treatment, delays in receiving treatment.

Sub-category 1.1.1: Continuously changing health care facilities

It was mentioned by the Health Care Workers that the HIV-positive pregnant women's continuous changing of different health care facilities contributed to delays and interruptions of treatment. Health Care Workers indicated the following:

“Some HIV-positive pregnant women patients change clinics by moving around different clinics.” (**BHCW4**).

“Some HIV-positive pregnant women go to the other facilities and not reveal their status.” (**IHCW6**).

Sub-category 1.1.2: Moving from one country to another

The participants reported that some HIV-positive pregnant women emigrate from the neighbouring countries into their health sub-district to be tested. Thereafter, they are nowhere to be found. They then come back for delivery of their babies. The participants commented that:

“Some emigrate from the neighbouring countries like Mozambique and Botswana. They will then later resurface in time to deliver.” (**BHCW4**).

“The government should build two rooms structured clinics at the borders for patients who cross the borders”. (**BHCW2**).

Sub-category 1.1.3: Delays and interruption of treatment

The participants mentioned that some HIV-positive pregnant women refuse to accept the HIV results, especially after testing positive. This non-acceptance causes delays and interruptions of treatment, as a result of which some of the HIV-positive pregnant women stop attending the PMTCT services due to stigmatisation. The following were reported:

“Some patients refuse to accept the outcome of the HIV-positive test. They mention that their blood is not reactive to HIV.” (**BHCW2**).

“They undergo testing and are thereafter nowhere to be found. This causes interruptions in their treatment.” (**BHCW4**).

Sub-category 1.1.4: Delays in ANC bookings

The findings revealed that most of the HIV-positive pregnant women book late for ANC, at twenty eight weeks and thirty two weeks' gestation. Some of the HIV-positive pregnant women are diagnosed during delivery, but still do not disclose their HIV status. The participants stated that:

“Some pregnant women are diagnosed during delivery, but still do not disclose their status.” (**JHCW3**).

“Most of the HIV-positive pregnant women book late, at twenty eight weeks and thirty two weeks’ gestation and this delays treatment.” (**IHCW4**).

Sub-category 1.1.5: Fear of rejection by partner and family

The findings showed that HIV-positive pregnant women are afraid to disclose and some are rejected by their families due to stigmatisation. The participants mentioned that:

“(Participant laughing softly) HIV-positive pregnant women do not disclose their HIV status to their partners and their in-laws.” (**JHCW1**).

“Other patients do not want to disclose to their partners.” (**BHCW3**).

“HIV-positive pregnant women are afraid to disclose and some are rejected by the families.” (**JHCW2**).

Sub-category 1.1.6: Isolation at clinics and stigmatisation by parents, family and community

The participants reported that some of the HIV-positive pregnant women were expelled from their homes by their parents. Others mentioned that they even had their dishes separated for fear of transmission. Stigmatisation first occurs within families, and later spreads throughout the community. Some Health Care Workers indicated the following:

“Stigmatisation of the patients should be reduced. It would be highly appreciated that HIV is treated in the same manner as Diabetes Mellitus and Hypertension. Stigmatisation could be reduced by means of integrating health care services. For instance, all the patients should be treated together. HIV-positive pregnant women should not be treated in isolation or at separate sites.” (**BHCW2**).

“Many of them stopped because of stigmatisation. For example, some reported that they were expelled from their homes by their parents, and others reported that their eating utensils were separated from those of other family members. “Stigmatisation is practised by the families first and then spreads to the community.” (**IHCW5**).

Although PMTCT programmes might be integrated into antenatal services, the different services may be located in different buildings, exposing HIV-positive women attending certain services to stigmatisation (Thorsen, Sunby & Martison 2008:4). Turan, Nyblade and Monfiston (2012:4) further assert that stigma and discrimination are major hindrances to the achievement of global goals for maternal health and the elimination of new infections in children.

In addition to the stigma of the mother being HIV-positive, other issues related to stigma included bearing an HIV-positive child, childlessness, and adopting family planning in societies that intimately value fecundity. All these happen in an environment characterised by the stigma of poverty, illiteracy, and the stigma related to domestic violence, which is associated with HIV infection; gender marginalisation and the stigma of single motherhood. These levels of stigmatisation have left mothers vulnerable and defenceless. Stigmatisation poses challenges to the effectiveness of PMTCT services, and escalates the need for more resources (Turan et al 2012:4).

4.8.2 Theme 2: Child feeding

Mixed feeding was reported to be practiced by the mothers and the child sitters. The findings revealed the challenge of mixed feeding as a result of mothers not disclosing their HIV status to their partners, parents and to their families. Babies were returned to the health care facilities as they became sick due to mixed feeding.

4.8.2.1 Category 2.1: *Child feeding challenges*

Because HIV could be transmitted through breast milk, a mother's method of infant feeding has a strong influence on the likelihood that her child may become infected. While breast milk is given to the babies, others do not prefer it, and this poses a challenge to the Health Care Workers. The child sitters were reported to be giving babies some medications, formula milk, and even solid food. This resulted in negative PCR test results of the six weeks-old babies who later became positive.

Sub-category 2.1.1: Mixed feeding by the mothers and the child sitters

Mixed feeding of babies by the mothers and the child sitters was reported by the participants. After giving birth and returning to their jobs, some of the mothers left the babies with their grandmothers who fed them with breast milk, formula milk, drops and solid food. The participants mentioned the following:

“They give breast milk to their babies even if they know the risks. Others mix breast milk and formula milk.” **(BHCW3).**

“The first problem is that of mixed feeding of babies by their mothers. Some stay with their in-laws and the persons remaining with the babies give drops, formula milk, and solid food (mixed feeding is practiced).” **(JHCW1).**

Sub-category 2.1.2: Babies becoming sick as a result of mixed feeding

The findings also revealed that the babies became sick as a result of mixed feeding. The mothers provided mixed feeding despite their knowledge of the risks. When the babies complicated, they brought them to the health care facilities. Some Health Care Workers reported their experiences thus:

“Could I add something? Some of them [mothers] mix feeding when they get home and thereafter bring the babies to the facilities with some problems.” **(IHCW1).**

“Some mothers stop breast feeding their babies before they are six months old, acting as though they did not obtain enough information on feeding. They do not like breastfeeding and this poses a challenge to us as Health Care Workers.” **(IHCW4).**

“To add on that one [the above statement], the challenge of mixed feeding is a result of mothers not disclosing their status to their partners, parents and to their families. Some of the mothers leave their babies with their grandmothers and return to their jobs. Grandmothers give the babies other feeds. This results in a negative PCR at six weeks, and at a later stage it becomes positive.” **(IHCW4).**

Why are mixed feeding methods risky for the child? It has been argued that babies who are mixed-fed are more vulnerable to the HI virus and other childhood infections. Any liquids other than breast milk or any solid food may disturb the lining of the gastrointestinal tract (or gut) of the child, which facilitates the entry of the HI virus (or other pathogens) into the child's system. All HIV-infected mothers should receive counselling, and they should be informed about the risks and benefits of various infant-feeding options in an unambiguous and unbiased way. The risks of not breastfeeding should be discussed and mothers should be guided in selecting the option that is most suitable to their situations. Breastfeeding HIV-infected mothers should be encouraged to use condoms to prevent re-infection with new strains of the virus, and to prevent an increase in their viral loads. In this manner, the chance of transmitting the virus to the child through breast milk is reduced (Van Dyk 2012:49).

The most effective way to prevent mother-to-child transmission of HIV involves a long course of antiretroviral drugs and avoidance of breastfeeding, which reduces the risk to below 20%. In high-income countries, the number of infant infections has plummeted since this option became available in the mid-1990s. Due to the lower effectiveness of single dose nevirapine, and its potential to facilitate drug-resistant HIV within mothers and infants, it is no longer recommended or considered to be adequate for PMTCT by the World Health Organization (WHO/UNAIDS/UNICEF 2011:1).

Financial constraints often limit a woman's ability to cease breastfeeding, either because she will not have the money to purchase formula feed to replace breast milk, or because a clinic has run out of formula feed. In South Africa, mothers may not have the finances to continue purchasing formula feed after six months, when the government stops providing free formula (De Paoli, Mkhwanazi, Richter & Rollins 2008:1663).

4.8.2.2 Category 2.2: Lack of knowledge with regard to child feeding

The Health Care Workers indicated that the HIV-positive pregnant women were not sure of exclusive breastfeeding or formula feeding for six months, stop breastfeeding before six months, and stop formula feeding before six months. Whether HIV-positive or not, the above is happening even if exclusive breastfeeding is clearly promoted as the ideal norm for all breastfeeding mothers as per government guidelines.

Babies become infected as a result of both exclusive breastfeeding and mixed feeding despite their mothers being on ARVs. The practice of mixed feeding was highlighted in cases where the fathers of the first born have died, and mothers having new partners in order to obviate the fear of rejection.

Sub-category 2.2.1: Exclusive breastfeeding for six months

The participants mentioned that since the promotion of exclusive breastfeeding for six months, whether HIV-positive or negative, most of the babies became HIV infected. This is clearly promoted as the ideal norm for all breastfeeding mothers as per government guidelines. The participants mentioned that:

“Another problem is that, since this promotion of exclusive breastfeeding, whether HIV-positive or negative, most of the babies become infected.” (**JHCW1**).

“They give breast milk to their babies even if they know the risks.” (**BHCW3**).

“They do not like breastfeeding and this pose a challenge to us as the Health Care Workers.” (**BHCW4**).

Sub-category 2.2.2: Discontinuation of breastfeeding before six months

The participants indicated that some of the HIV-positive pregnant women hold the idea that HIV could be transmitted during breastfeeding. On the other hand, lack of knowledge with regard to child feeding has led them to stop breastfeeding before six months. Participants stated that:

“Some HIV-positive pregnant women stop breastfeeding before their babies are six months old.” (**BHCW3**).

“Most of the HIV-positive pregnant women still believe that HIV can be transmitted to the babies during breastfeeding regardless of the available ARVs.” (**IHCW6**).

Sub-category 2.2.3: Exclusive formula feeding for six months

The participants reported that lack of knowledge with regard to child feeding also led to HIV-positive women not knowing whether to feed their babies with formula milk for six months or not. One facilitator of the PMTCT programme did not advise the Health Care Workers to give formula milk to employed HIV women. Instead, the facilitator encouraged breast milk. This is verified by the following statements:

“With Pellargon (formula feed), one facilitator informed us that we must not give it to mothers who are working, they must breastfeed for six months.” (**JHCW6**).

“Some the HIV-positive pregnant women after giving birth they leave their babies with the grannies who give formula feeding.” (**BHCW4**).

Sub-category 2.2.4: Discontinuation of formula feeding before six months

The findings also revealed that HIV-positive women were not knowledgeable about whether or not formula feeding should cease before six months. However, it appeared that the facilitators did not recommend formula milk for HIV-positive women. The participants mentioned that:

“Babies are being infected as a result of mixed feeding. Some pregnant women threw away their files and went to the delivering facilities as though they had not booked. When the child becomes ill, we start to wonder because we knew that the mother was on ARVs prior delivery. Some of these women do this after getting new partners in order to suppress the fear of rejection. We encounter cases like this when the fathers to the first born have died.” (**IHCW1**).

“Some HIV-positive pregnant women stay with their in-laws and left the babies with them after delivery, formula feeding then discontinued as they give babies solid food.” (**JHCW8**).

A lack of up-to-date information results in health workers giving poor advice and poor-quality counselling on important practices like exclusive breastfeeding (Coovadia & Bland 2007:116). Health Care Workers reported that they did not have guidelines to share with mothers to support them in their-feeding choices (De Paoli et al 2008:1663).

About 20% to 30% of babies who are infected through mother -to-child transmission contract the virus through breastfeeding. Although there are certain maternal risk factors for MTCT, such as a high viral load during certain stages of infection, mother-to-child transmission from breastfeeding could occur at any time during the course of the mother's HIV infection. HIV-infected cells are present in the breast milk of HIV-infected mothers throughout the breastfeeding period. There are many breastfeeding factors that may contribute to the child's risk of infection, such as duration of breastfeeding, pattern of breastfeeding, health of the mother's breasts, the child's mouth, and the mother's sexual behaviour during the breastfeeding period (Van Dyk 2012:48).

The pattern of breastfeeding (exclusive versus mixed feeding) may also influence MTCT. It has been established irrefutably that exclusive breastfeeding for six months is the optimal feeding type for all babies, irrespective of their HIV status (Coovadia 2010:1).The WHO recommends exclusive breastfeeding for all babies born in constrained settings in developing countries because the advantages of breastfeeding are much higher than those of formula or replacement feeding. Exclusive breastfeeding is a feeding practice in which the infant receives only breast milk and absolutely no other liquids or solids, including water. The child may receive only drops or syrups consisting of vitamins, mineral supplements, or medicines that are deemed necessary and essential for the child. The same principles apply for babies who receive expressed breast milk (Department of Health [SouthAfrica] 2010:19, 25).

The number of babies who die from gastroenteritis, malnutrition and respiratory infections in Africa is so high that the benefits they derive from breast milk are much higher than the risk of HIV infection if they are exclusively breastfed for six months only. Complementary foods could be introduced after six months.

4.8.3 Theme 3: Formal in-service trainings and workshops on the PMTCT programme

Education has a key role as higher levels of knowledge about HIV and PMTCT are associated with promotion of early diagnosis and initiation of ARVs prior to the onset of symptomatic diseases. The Health Care Workers mentioned that they needed support from the health sub-district management on rendering the services of the PMTCT

programme. They highlighted that some of Health Care Workers were not conversant with the PMTCT programme. Refresher trainings, in-service trainings, workshops and on-site mentoring on the PMTCT programme were among the formal trainings mentioned as indispensable.

4.8.3.1 Category 3.1: Lack of PMTCT programme knowledge

The findings revealed that Health Care Workers needed training and support on the PMTCT programme. The continuous skills development and up-dating of Health Care Workers' knowledge on the PMTCT emerged as one of the key areas for facilitating the accessibility and availability of the programme. Willingness to train HIV-positive pregnant women on conducting the support groups was also emphasised. However, all the Health Care Workers in this study expressed the need for more training on PMTCT programme to update their knowledge and skills given the rapid changes on issues of HIV at global and national levels. The common areas identified regarding further training were: support of health sub-district management, encouragement of HIV-positive pregnant women on conducting support group sessions, in-service trainings by the NGOs, and provision of same information on PMTCT by the programme.

Sub-category 3.1.1: Lack of support by the health sub-district management

During the FGDs, the Health Care Workers mentioned that there was a lack of knowledge on the PMTCT programme. They further highlighted that they lacked support from the health sub-district management. They were also uniquely affected by HIV/Aids since they too have HIV-positive pregnant relatives. Such a situation necessitated that enough information and knowledge about the PMTCT programme be made available to them. Participants stated that:

“As Health Care Workers at I Cluster, we really need the support of sub-district management on rendering the services of the PMTCT programme.” (**IHCW2**).

“The support from the sub-district Health Management is needed. When there is a training session, for example practical approach to lung health and HIV in South Africa (Palsa Plus), the management wants us to be trained and we don't

want to be forced. We want to go for training voluntarily and it will be easier for us to teach other colleagues." **(IHCW1).**

Sub-category 3.1.2: Insufficient facilitators' knowledge concerning the PMTCT programme

The findings revealed that when the PMTCT programme facilitators also called the coordinators facilitated workshops to the Health Care Workers, they do not possess enough information concerning the PMTCT programme. As PMTCT knowledge is evolving, Health Care Workers showed the need to be continually up-dated through continuing education of the PMTCT programme by the knowledgeable facilitators. A significant knowledge base is required for the achievement of quality care rendered by the PMTCT services. The participants further reported that they wished that PMTCT programme education should be incorporated into the curricula of high schools and tertiary institutions. The following were mentioned by different Health Care Workers participants:

"And we must encourage the HIV-positive pregnant women to train (practice) how to conduct the support groups. They must own these trainings and we the HIV/Aids Counsellors will train with them and guide them where there is a need." **(IHCW4).**

"As M2M mentor, I know how to counsel am not allowed to do PCR because my scope of practice does not allow me to prick an HIV-positive pregnant woman. Love Life and M2M trainings must reskill us so that we could do the PCR on babies and HIV testing on pregnant women." **(IHCW5).**

"Some of us Health Care Workers are not conversant with the PMTCT programme." **(JHCW2).**

"Trainings of the Health Care Workers on PMTCT programme are needed so that they are able to teach the very same community (Participant smiling). Support groups should be formed by the very same HIV-positive pregnant women so that they are able to share information." **(JHCW6).**

"I have a challenge with this programme. A person giving a lecture (facilitator) emphasises the advantages more than the disadvantages. For example, with

regard to Pellargon (formula feed), one facilitator informed us that we should not give it to working mothers. They must breastfeed for six months and express breast milk when going to work. I once attended a TB and HIV workshop sponsored by Foundation for Professional Development (FPD) and another one sponsored by the NDOH. Two doctors held views that were at variance with each other. Who do we listen to? Palsa Plus told us to consider its perspectives, and nurse initiated management of anti-retroviral therapy (Nimart) also advised us to consider something else. I think it is best for the facilitators to have enough information and knowledge on the PMTCT programme. Some facilitators are sometimes unable to answer when something is not in the manual." (**JHCW6**).

Lack of trained lay counsellors has been found to inhibit the number of people who receive services like voluntary counselling and testing (VCT). South African research has indicated that North West and Eastern Cape provinces are still struggling to integrate lay counsellors into their VCT programmes. It was not surprising, therefore, that these two provinces reported low percentages of HIV testing in the ANC setting (14% testing uptake in the North West, and 34% in the Eastern Cape) (Doherty, Besser, Donohue, Kamonga, Stoops, Williamson & Visser 2003:1).

A shortage of appropriately trained and skilled health workers impacts on general service delivery (Department of Health 2008b:1; WHO 2007:1; Tearfund 2008:1). Research conducted at a clinic in the rural Eastern Cape Province, for example, reported that after PMTCT practices were integrated into the clinic, no additional staff members were allocated to the clinic. As a result, the clinic was staffed by nurses and nurse assistants who reported that they did not have the capacity to provide quality services (Skinner, Mfecane, Henda, Dorkenoo, Davids & Shisana 2003:115).

Health Care Workers in rural and urban sites should include the full range of health workers such as HIV managers, programme directors, administrative staff, doctors, nurses, lay counsellors, full-time counsellors, supervisors, and mentors. Communication with these participants occurs at two interrelated levels. First, they are actively involved in communicating important PMTCT information to programme clients. Literature has demonstrated the extent to which health workers' attitudes and interactions and levels of knowledge could become barriers to the success of PMTCT programmes. Secondly, these participants are themselves in need of up-to-date information and on-going training to ensure that they provide quality information and

advice to their clients in a non-judgemental and non-discriminatory manner (PAHO/WHO, UNICEF, CENSIDA & Mexico 2002:6).

4.8.4 Theme 4: Lack of and shortage of resources

Lack and shortage of resources emerged as one of the major themes during the data analysis phase. The Health Care Workers highlighted that there were shortages of staff and consulting rooms. PMTCT programme services were at times provided at the parking areas and park homes with no privacy. Shortage of ARVs was also reported. Resources include different categories of Health Care Workers, big health care facilities and medication, especially the ARVs.

4.8.4.1 Category 4.1: Shortage of staff and medication

Health Care Workers expressed commitment to providing a quality PMTCT programme, but many expressed concerns about their actual capacity, given the fact that they wished to do things correctly. It was also reported that ARVs that were already in short supply were being requested from the neighbouring clinics. The influx of people to the mines, as well as the preponderance of informal settlements contributed to big health clusters that needed a multidisciplinary team approach.

Sub-category 4.1.1: Shortage of staff

During the FGDs, virtually all the Health Care Workers complained of their health sub-district being understaffed, limiting the PMTCT services that are ultimately delivered. After the introduction of PMTCT programme, no additional staff members were provided. Appointment of more staff was raised as a need since they also attended to pregnant women from other countries. This study revealed that the ratio of nurses to patients does not balance. This is largely caused by understaffed health facilities in South Africa. More trained nurses, social workers and Health Promoters are needed to offer better PMTCT services and to ameliorate the staffing challenge. These are supported by the following comments:

“I think staff needs to be increased because we have a problem of being short staffed, and we see pregnant women from other countries. There is a huge influx

of people in this cluster. More Health Care Workers must be appointed.” **(BHCW2).**

“It will help a lot to have more Health Workers trained on HIV at the informal settlements in order that they could work with the HIV-positive pregnant women. This area is surrounded by mines and informal settlements. More Health Care Workers are required in these areas in order to train people on the PMTCT programme.” **(BHCW3).**

“More Nimart trained nurses should be employed, or those who are available should be Nimart trained. We had one training last year, but trainees were not enough. All nurses must be trained on Nimart in order to deliver a better PMTCT service. Nimart should be included in the nursing diploma and degree curricula. If all nurses are well trained, this will reduce the practice of one nurse working with HIV-positive pregnant women alone.” **(BHCW2).**

“The employer [Health Department] should send us enough staff, more medication, and increase space by building a bigger health care facility.” **(IHCW7).**

“Any additional information is about shortage of staff. There is no Social Worker. The forms that the Nurse initiator fills need the information of the Social Worker also. We are also running short of staff such as psychologists. Actually, this is a big cluster and it needs a multidisciplinary team approach. As nurses we do not have Social Work background.” **(IHCW8).**

“A lot of staff is needed. We could not work with ANC, Nimart and PMTCT programme while we are understaffed at the same time.” **(IHCW1).**

“The PMTCT programme is not efficient. Most of the clinics in this cluster do not have the M2M mentors. No, let me just stop here.” **(IHCW1).**

“I think more staff is required to do things correctly. When we are few, we do things in a rough shod manner. Short staffing is a problem.” **(IHCW5).**

“Truly speaking special Health Care Workers who work with the PMTCT programme are needed as a priority.” **(JHCW6).**

Sub-category 4.1.2: Shortage of medication, ARVs

The participants poignantly reported that they experienced acute shortages of medication, especially ARVs, and even sought assistance from neighbouring health sub-district pharmacy and neighbouring clinics. The findings are in line with UNICEF report (2003:12), which indicated that shortage of medicines and other supplies (including HIV test kits and preventive drugs) is a common phenomenon in many clinics. The participants further reported their experiences thus:

“The other problem is that we run short of some medication, especially cotrimoxazole. As a follow-up on that one, we do not have a chance to go and do home visits. We do not have Health Promoters. We do not have people who do home visits. Previously, we used to have some but currently we don’t. There are no support groups.” (**IHCW1**).

“When the ARVs are out of stock at the pharmacy, we borrow from the neighbouring clinics.” (**JHCW6**).

Staff shortages in resource-limited settings are a major obstacle to the scaling-up of HIV care and treatment, including PMTCT availability and accessibility. A performance-based system for providing PMTCT services may therefore improve maternal neo-natal child health (MCNH) and long-term HIV care and treatment. As efforts are expended towards eliminating paediatric HIV infection through PMTCT in resource-limited countries, it is imperative to improve the quality of the existing health care workforce (Toure, Audibert & Dabis 2010:2).

Another method for improving the provision of PMTCT services may be the formal reorganisation of tasks among health-care workers. Reports from rural and primary health-care centres in Rwanda, Lesotho and elsewhere including South Africa, demonstrate that nurses could prescribe antiretroviral treatment safely and effectively to HIV-infected adults and children, provided that they receive adequate training and support. A cost-minimisation model has also shown that task-shifting during the follow-up patients on ART has also shown substantially reduce costs as well as the need for physician (Toure et al 2010:3).

The current Minister of Health in South Africa, Dr Aron Motswaledi warned that South Africa was the highest consumer of antiretrovirals in the world, which puts a strain on the government's budget, and something needed to be done about that: "That is why the goal is to test 650 000 people in a year, there is no other way!" (Supatsela Leading the way, Issue 60 2012:1). Ngidi et al (2013:13) further reported that pregnant HIV-infected women were identified as a priority group. However, despite the availability of key resources and medications, antiretroviral treatment rates for pregnant women in South Africa remained low. A targeted campaign among Health Care Workers could accelerate access to antiretroviral therapy for pregnant HIV-infected women.

Scientists in Uganda found better results, but only among a community used to taking part in scientific research (Kagaayi 2005:1). To be fully effective, medication needs to reach new-born babies and their mothers. Infant doses are given in syrup form and are usually available only to women who give birth in clinics (Kasenga, Hurtig & Emmelin 2007:646). Some programmes, however, succeeded in dispensing the syrup in advance inside sealed oral syringes, in order to be administered after home births (Temmerman 2003:8; Wilfert 2006:1).

PMTCT programmes could increase acceptance of self-administered drugs by working with traditional birth attendants, as they attend to the majority of home deliveries. With sufficient training, traditional midwives might also be able to provide other services such as HIV education, testing and counselling, and advice on infant feeding (Bulterys 2002:7331).

The introduction of ARV treatment not only prolongs lives, but also improves the quality of life of pregnant HIV infected women. Many people are still alive because they have the opportunity to access ARV treatment. But ARV treatment is only beneficial when people adhere to their treatment regimes on a daily basis for the rest of their lives. The benefits also depend on the on-going availability and uninterrupted supply of quality medications for a lifetime. It is imperative to ensure that people who start ARV treatment do so as part of a sustainable programme that ensures availability, continuity and quality of the treatment for as long as it is needed (Du Bois 2007:16).

4.8.4.2 Category 4.2: Layout and size of health facility

Spatial constraint was a recurrent phenomenon at all the clusters. Consulting rooms themselves were a rarity. The Health Care Workers wished that the government could build clinics at the borders for patients who emigrate from their own countries. The need for privacy and enough consultation rooms for HIV-positive pregnant women were mentioned as of importance since more HIV-positive pregnant women were on the denial stage and needed moral support. The layout and size of a health facility impacted on the services and quality of the PMTCT programme due to many HIV-positive pregnant women.

Sub-category 4.2.1: Insufficient consulting rooms

The findings indicated that the consulting rooms were not enough. The participants further wished that the government should build more consulting rooms in order to accommodate immigrants as well. This view is evident from the comments such as:

“The government should build clinics at the borders for patients who immigrate to the country.” (**BHCW2**).

“I think the sub-district’s Department of Health must play a role. PMTCT programme needs privacy. It needs persons who work with PMTCT patients. These persons must have rooms and know their patients.” (**IHCW1**).

Sub-category 4.2.2: No privacy in parking areas and park homes

The parking areas and park homes were used for PMTCT programme services, instead of being used as areas to facilitate more doctor/nurse privacy. As far as the participants were concerned, PMTCT programme needs privacy and Health Care Workers must have rooms to work with their patients in total privacy. The participants indicated that:

“We the M2M group were doing the support groups, patients stopped participating because there is no space and no privacy. We were doing it at the parking area, then the pregnant women stopped coming. First of all, the government must do something here at our cluster because there is no space.

They must build more rooms. More HIV-positive pregnant women are on denial stage, they need moral support.” (**IHCW5**).

“PMTCT programme needs privacy. It needs private rooms for consultation of the HIV-positive pregnant women.” (**BHCW1**).

In relation to the layout and size of facilities, these findings concur with those of the American Association of Colleges of Nursing (AACN) (2007:15) who indicate that designs should be considered that streamline patient care processes and reduce moving patients from one area to another. These facility designs reduce labour costs and potential for medical errors that occur during patient transfers; and also increase patient and nurse satisfaction (AACN 2007:15). According to a study conducted in Eastern Uganda, programme improvement occurs under the following circumstances:

- Constant availability of critical PMTCT supplies such as provision of adequate facilities for effective follow-up and support for mothers (Rajumba, Tumwine, Tylleskar, Neema & Heggenhougen 2012:12).

4.8.5 Theme 5: Loss to follow-up activities

It emerged during data analysis that HIV-positive pregnant women do not return for ANC follow-ups. There was a common feeling among the Health Care Workers on the need for active follow-up for mothers in the PMTCT programme, especially at the health clusters.

4.8.5.1 Category 5.1: Unstable HIV-positive pregnant women

The findings of this study emphasised that the HIV-positive pregnant women were unstable, and this resulted in loss to follow-ups. Other mothers did not come back due to their babies’ HIV negative results, and even stopped all the prophylaxis treatment. Health Care Workers revealed that PMTCT programme at most health care facilities was limited to HIV counselling, testing and referring HIV-positive pregnant women to other facilities for delivery.

Sub-category 5.1.1: Discontinued Home Visits and Door-to-Door Campaigns

The findings indicated that home visits and door-to-door campaigns were not done to trace those HIV-positive pregnant women who did not come for ANC follow-up. The participants stated that adequate number of campaigns and door-to-door visits about the PMTCT programme was indispensable. This is verified by the following comments:

“Enough staff, adequate number of campaigns and door-to-door visits about the PMTCT programme, these are the requirements.” (**JHCW1**).

“As a follow-up on that one, we do not have a chance to go and do home visits. We do not have health promoters.” (**IHCW1**).

Sub-category 5.1.2: HIV-positive pregnant women not returning for ANC follow-ups

The findings showed that HIV-positive pregnant women were not returning for ANC follow-up, and at times stopped their ARV treatment themselves. The participants stated that:

“Some of the HIV-positive pregnant women take chance by not returning for ANC follow-ups and also stop taking the ARVs on their own” (**JHCW8**).

“Some HIV-positive pregnant women take risks and stop taking the ARVs on their own.” (**JHCW6**).

Sub-category 5.1.3: HIV-positive pregnant women returning to the clinics during delivery time

Study participants reported that some HIV-positive pregnant women return to the clinics only during delivery time. Some even threw away their files and went to the delivering facilities as un-booked cases. The participants mentioned that:

“Some HIV-positive pregnant women throw away their files and go to the delivering facilities as unbooked cases.” (**JHCW8**).

“Some HIV-positive pregnant women are diagnosed during delivery, but still do not disclose their status.” (**JHCW10**).

Sub-category 5.1.4: Babies not returned for Polymerase Chain Reaction (PCR) test at six weeks post-delivery

The findings further revealed that mothers also did not return the babies at the health care facilities for PCR testing at six weeks post delivery, and this resulted with Health Care Workers seeing the babies only when they were sick. This was indicated by the participants mentioning that:

“The other problem is that we lose the babies at six weeks. Mothers do not come back for PCR testing at six weeks. We only see the babies when they are sick. The mothers also do not come back when the babies’ results are negative. They stop all the treatment, especially those that are on prophylaxis. They say that so long as the results are negative, they are unperturbed with their babies.” (**IHCW2**).

“With us here at J cluster, we do not do deliveries and we use two files, Maternity and ANC files, because our pregnant women do not reveal their HIV status when they go to the delivering facilities for deliveries.” (**JHCW6**).

Preventing mother-to-child transmission might seem simple: just hand out lots of pills. In fact, there is much more to it than that. To begin with, the vast majority of women in the low and middle-income countries have never been tested for HIV and do not know whether they are infected. This means that effective PMTCT programmes must provide counselling and testing services to determine which women need assistance. And even if a clinic offers counselling and testing to every pregnant woman, the reality is that not all of them accept it. Others, having been tested, fail to return to receive their results. This is just the beginning of a series of steps that leads to the ideal outcome, which is to reduce the risk of transmission as far as possible. At each step, some women drop out. By the end, it is possible that only a minority will remain. The entire process is illustrated below.



Figure 3.1 Counselling and testing process

Many other studies in very poorly resourced areas have shown that such high drop-out rates are not unusual (Stringer 2005:12; Perez, Mukotekwa, Miller, Orne-Gliemann, Glenshaw, Chitsike & Dabis 2004:7475; Manzi, Zacharia, Teck, Buhendwa, Kazima, Bakali, Firmenich & Humblet 2005:1242). Poor referrals within the healthcare system and between clinics have a negative impact on follow-up visits (WHO & UNICEF 2007:1) and on the continuity of care between the different facilities (Jones, Sherman & Varga 2005:466). Geographical constraints often undermine the effectiveness of models like the family-oriented approach to PMTCT (Tonwe-Gold, Ekouevi, Bosse, Toure, Kone, Becquet, Leroy, Dabis, Sard & Abrams 2009:204).

It is important to communicate to the relevant participants that there are major socio-economic constraints that limit the ability of women to access and adhere to PMTCT services and practices like regular-follow up visits. The literature has shown that in certain contexts (particularly rural areas), poor telecommunications, poor transportation infrastructure, and peoples' inability to access grants could make it impossible for women to benefit from PMTCT services. Programme managers need to better understand the social circumstances of mothers (Okonkwo, Reich, Alabi, Umeike & Nachman 2007:242).

4.8.5.2 Category 5.2: Transport problems

The transport problems in the sub-district were raised by the Health Care Workers as they struggle to find the ARVs for the HIV-positive pregnant women and their babies. Delivery of the ARVs from the district hospital pharmacy was reported to be depended on availability of transport and also on availability of the very same treatment.

Sub-category 5.2.1: Health Care Workers' use of own transport

The study participants reported that they were using their own cars for fetching the ARVs from other health care facilities and from the district hospital pharmacy. The participants reported that:

“There is no transport and we use our own transport or cars to fetch the ARVs. Delivery of ARVs from the hospital’s pharmacy depends on availability of transport and treatment.” (**JHCW6**).

“There should be transport available at the sub-district and the hospital pharmacy so that delivery of ARVs should not be delayed. The Health Care Workers use of their own private cars should be stopped and they attend to the patients in the clinics.” (**IHCW7**).

Sub-category 5.2.2: HIV-positive pregnant women's usage of public transport and family transport

To HIV-positive pregnant women, the above-cited shortages often resulted in additional costs as they have to use their own transport or public transport to collect the ARVs from the neighbouring clinics and also from the district health pharmacy. Two of the participants articulated the matter thus:

“If we realise that there are ARVs which are out of stock, we phone other clinics to give the patients as we have prescribed in their files. Patients also have to use their own transport or public transport to collect the ARVs at wherever clinic they are available.” (**JHCW6**).

“To pregnant women, these shortages of ARVs often translated into additional costs in the form of transport as they struggle to find the drugs for themselves and for their babies.” (**JHCW1**).

Lack of money in low-income areas prevents follow-up visits. For example, in the contexts where transportation is needed to reach health care sites, people may not have the money to pay for it (Kagee 2008:413; Tearfund 2008:1). Clients across sub-Saharan Africa may have to walk considerable distances to clinics due to a lack of

money for transportation and the vast distances between sites (WHO & UNICEF 2007:1). In the North West Province, the average time it took a pregnant woman to reach a clinic by bus is almost an hour, and an ambulance takes more than three hours to reach some of the villages such as Kwarrie Kraal (City Press 2009:6).

HIV-positive pregnant women live a long way from their nearest health facility and have little access to transport. It is therefore hardly surprising that a third of the world's pregnant women do not attend antenatal clinics (WHO 2005:1). Many other women visit clinics only once during pregnancy, and nearly two thirds give birth unattended by a skilled health worker (WHO 2006:1). This already reduces the number that could be reached by PMTCT programmes. The problem is compounded by women having to make follow-up visits to receive counselling, drugs or other services.

Poor transportation infrastructure inhibits the up-take of services since people are unable to get to relevant treatment sites (Kagee 2008:413; Tearfund 2008:1). A lack of telephones and money to buy airtime in rural areas impacts on referrals and general PMTCT delivery.

4.9 CONCLUSION

The results of the study were discussed in the light of the relevant literature in order to contextualise the findings. The experiences of HIV-positive pregnant women and Health Care Workers with regard to the availability and accessibility of the PMTCT programme were revealed by the discussed findings of the study. The data were also analysed and presented in the form of main themes, categories and sub-categories.

The next chapter focuses on the development of the conceptual framework based on the results of Phase 1 as discussed in this chapter.

CHAPTER 5

A CONCEPTUAL FRAMEWORK FOR THE FACILITATION OF PMTCT STRATEGIES

5.1 INTRODUCTION

In this chapter, the conceptual framework will be described and discussed to provide the basis to develop strategies to facilitate the availability and accessibility of the PMTCT programme to the HIV-positive pregnant women. The aim of this chapter is to conceptualise the empirical findings of Phase 1 in order to develop strategies for the facilitation of availability and accessibility of the PMTCT programme in the Madibeng Health sub-district.

5.2 CONCEPTUAL FRAMEWORK

A framework is the conceptual underpinnings of a study. This study is guided by the following conceptual framework:

- The Quality Health Outcomes Model (QHOM) (Mitchell et al 1998:43).
- The “Theory in a Practice Discipline” Survey List of Dickoff, James and Wiedenbach (Dickoff et al 1968:468).

In particular, the QHOM addresses the human-environment interactions that influence the effect of nursing interventions on client outcomes, and its four constructs address the Survey List as the conceptual framework.

5.3 THE QUALITY HEALTH OUTCOMES MODEL (QHOM)

The model was developed by the American Academy of Nursing Expert Panel on Quality Health Care (Mayberry & Gennaro 2001:141; Mitchell et al 1998:43) as a conceptual guide for healthcare systems research from the expert panel members’ on-going research, expert opinion, and the literature of nursing and health services. In

1998, the Expert Panel on Quality Health Care of the American Academy of Nursing published the QHOM as a conceptual framework for quality and outcomes research, most specifically as a means to establish relationships among the elements of structure, process and outcomes.

This model, therefore proposes two-direction relationships among the components, with interventions always acting through characteristics of the system and client. Thus, interventions affect and are affected by both system and client characteristics in producing desired outcomes. Furthermore, the connection between system and client indicates the hypothesis that no single intervention acts directly through either system or client alone. The effect of interventions is mediated by client and system characteristics, but is thought to have no independent direct effect. The utility of QHOM in guiding research is better understood when used to guide the testing of nursing interventions at both the individual and system level (Mitchel et al 1998:44).

5.3.1 Reasons for using QHOM

With its multiple feedback loops and outcomes, QHOM is likely to be more sensitive to nursing inputs. This model is therefore likely to be more useful in delineating the relationship among nursing structural and process variables that are occasionally demonstrated to be crucial to patient outcomes. The most salient reasons for using QHOM are sufficiently broad to be categorised as to:

- guide the development of databases relevant to quality improvement initiatives and outcome management initiatives
- suggest key variables in clinical intervention research
- provide a framework for outcomes research and outcomes management that compares not only treatment options, but organisational or system-level interventions

Furthermore, consensus about elements of the model could also influence several areas of health care policy.

The QHOM posits reciprocal interaction among the four constructs: system characteristics, interventions, client characteristics and outcomes. Outcomes of patient

care or health delivery interventions in institutions and the community are mediated and moderated by characteristics of the system and client, with both client and care system capable of being understood and measured at multiple levels (from individual to population). The traditional elements of structure are measured as part of the system of care. The processes could be directly measured as specific interventions or as system processes (Mitchel & Lang 2004:5).

Thus this model will be applicable for developing strategies to facilitate the availability and accessibility of the PMTCT programme for HIV-positive pregnant women due to its dynamism and complex relationships that could lead to effectively testing variables that are sensitive to nursing interventions. The model also recognises the feedback that occurs among clients, the system or context in which the care is provided, and interventions. It is important for nursing systems research because it incorporates essential components of nursing care characterised by structure and processes that integrate functional, social, psychological aspects of patients' experiences and when promoting health (Mitchell et al 1998:44).

5.4 THE SURVEY LIST OF DICKOFF, JAMES AND WIEDENBACH

The above-cited Survey List consists of six elements or activities of The Practice Oriented Theory as outlined by Dickoff et al (1968:415), and whose constituent primary elements are: agency, patency (receiver/recipient of activity), framework (context), terminus (purpose), procedure, and dynamics.

5.4.1 Reasons for using the survey list

The reasoning map or rationale used here refers to a structure of concepts and stipulates the six elements or activities mentioned in Section 5.4 above regarding the activity to be taken (Dickoff et al 1968:425). These elements or activities call attention to certain aspects of activity and to certain dimensions, knowledge, or other relevant resources activity. The six elements or activities provide a basis for the development, explanation and application of strategies. The aspects and questions are:

- **Purpose or Terminus:** What is the goal of this activity?

The purpose or terminus is the end result of the activity; that is, the outcome. It also relates to the type of activities, their boundaries and goals that a person engages in.

- **Agent:** Who practices this activity?

According to the survey list, the agent is someone who has the knowledge and ability to perform identified activities or provides a solution to the problem (Dickoff et al 1968:246). In this study, an agent is the one who performs and facilitates the activity of rendering the services of the PMTCT programme. Different groups practice the activity, namely Health Care Providers or Health Care Workers at the health sub-district, including lay counsellors and other partners such as the non-governmental organizations (NGOs).

- **Recipient:** Who receives this activity?

The recipient refers to the beneficiary of the activity designed or performed by the agent. The recipients of the activity are mainly the HIV-positive pregnant women who are enrolled on the PMTCT programme at the clinics or the health care facilities.

- **Framework (context):** In what context does this activity take place?

The context is the area in which the interventions/procedures need to be carried out. The activity takes place in the Madibeng Health sub-district of Bojanala Health District in the North West Province. The health care facilities of the three clusters provide the PMTCT programme services to the HIV-positive pregnant women. In all the health care facilities, PMTCT programme services are rendered by the Health Care Workers.

- **Dynamics:** What is the energy source for the activity?

The dynamics are the challenges of the activity. According to the survey list, “dynamics” relates to those factors that generate energy to motivate performance (Meleis 1991:170 cited in Monama 2009:133).

- **Procedures:** What is the guiding procedure for the activity?

Procedures relate to the techniques or protocols that guide the activity (Dickoff et al 1968:245). In the most obvious sense of the term, “procedure” suggests the steps to be taken towards accomplishment, and may even suggest the proper equipment, arena, or situation for carrying out an activity under the procedure’s rubric. A procedure may indicate danger and success signs that occur in the course of following the procedure, and may propose what other activities; follow-up, reporting, or repeating are appropriate in conjunction with the initiated pattern of activity (Dickoff et al 1968:430).

5.5 DESCRIPTION OF THE CONCEPTUAL FRAMEWORK USING QHOM AND SURVEY LIST

The QHOM will be used in conjunction with the Survey List of activities in order to link the findings of the study to the body of knowledge and conceptualise this in practice through development of strategies to facilitate the availability and accessibility of the PMTCT programme (Grove et al 2013:134). The key concepts of QHOM namely, the system, the system characteristics, client, interventions, purpose, end results of procedures and for survey list of Dickoff et al namely, the agent, recipient, procedure, dynamics, outcome and terminus are depicted in a diagrammatical presentation in figure 5.1. The relationship of the two models to this current study of exploring and describing the experiences of HIV-positive pregnant women and the experiences of Health Care Workers with regards to the availability and accessibility of the PMTCT programme could not be ignored. The integration of the models is complementary to the concepts found in this research study. The discussions below clearly depict the basis upon which strategies for the current study will be developed. Figure 5.1 represents a diagrammatic presentation of the conceptual framework.

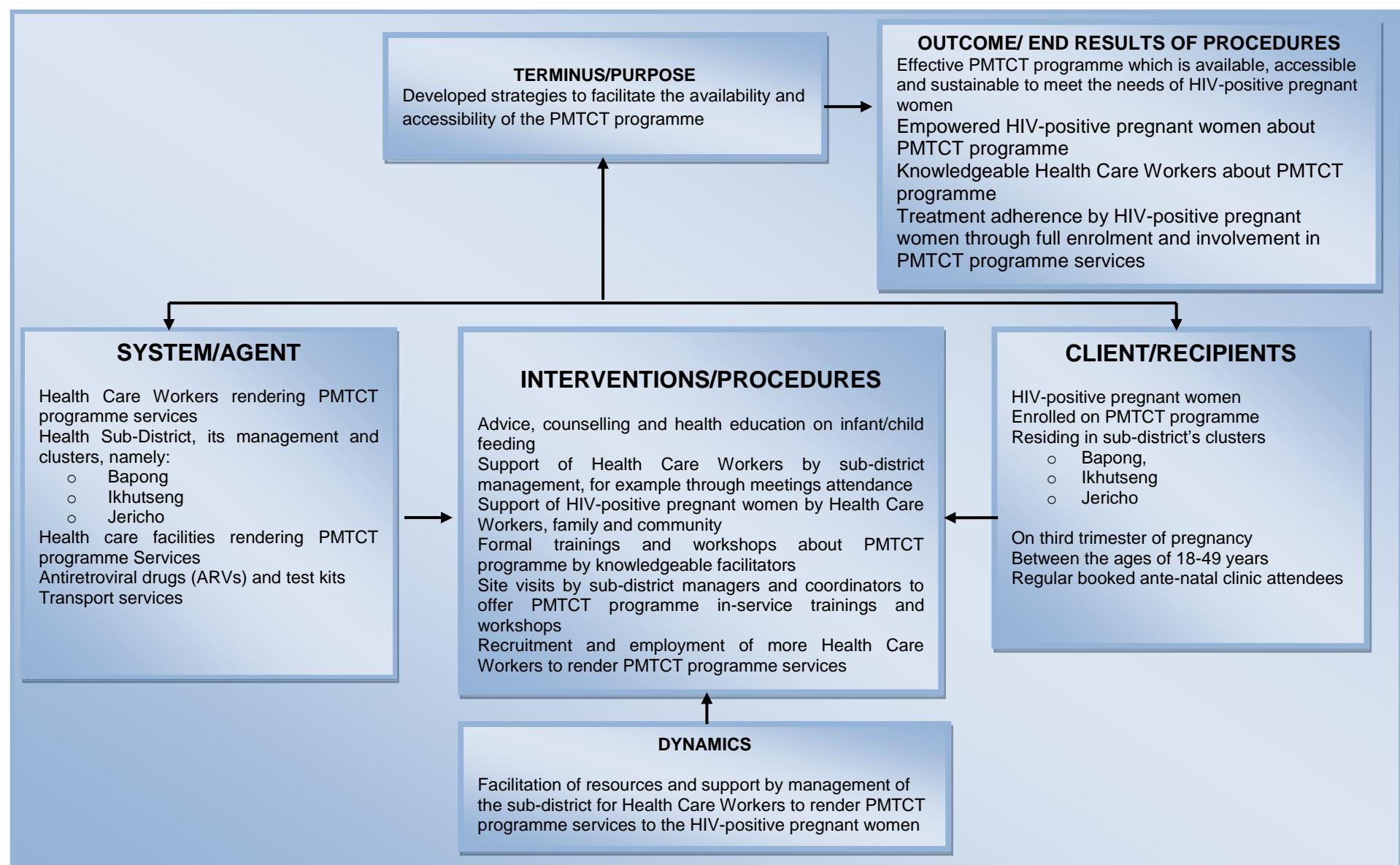


Figure 5.1 Conceptual framework for available, accessible, effective, and sustainable PMTCT programme

5.6 BRIEF DESCRIPTION OF THE DEVELOPED CONCEPTUAL FRAMEWORK

Brink et al (2010:23) assert that a model is frequently described as a symbolic depiction of reality. It provides a schematic representation of certain relationships among phenomena, and it uses symbols or diagrams to represent an idea. In addition, Polit and Beck (2008:141) argue that a framework provides a perspective regarding interrelated phenomena. Grove et al (2013:703) describes phenomena as experiences that cannot be explained by examining causal relations but need to be studied as the very things they are.

With regard to the conceptual framework in figure 5.1, the system/context relates to the Health sub-district where the services of the PMTCT programme are rendered. System/agents are the resources which include human, material, financial and infrastructural for facilitation of availability and accessibility of the PMTCT programme. For the programme to be effective and sustained the roles of the Health Care Workers, management, facilities, drugs and transport services are required. The resources need to be strengthened through advocacy, support and response towards challenges of the clients/recipients who are the HIV-positive pregnant women enrolled in the PMTCT programme.

Furthermore, the dynamics/challenges should be addressed through implementation of the interventions/procedures in order to enhance the services of the PMTCT programme. Terminus/purpose should focus on positive outcomes which are the end results of the procedures to be implemented for the benefit of the client/recipients, meaning the HIV-positive pregnant women. In short, for the PMTCT programme to be available and accessible effective and sustained, a joint multi-sectoral approach for implementation of the interventions/procedures should be strengthened. The team should include Health Care Workers, management, health care facilities (clusters), supplies, community, family and the HIV-positive pregnant women within the system/context, health sub-district.

5.6.1 System characteristics (context)

A system is an organised agency, such as a hospital or provider network. The size, ownership, skill mix, client demographics, and technology would be among structural

elements that interact with treatment intervention processes to affect health outcomes as explained by Mitchell et al (1998:43). The system or context is the Madibeng Health sub-district of Bojanala Health District in the North West Province with three (3) clusters Bapong, Ikhutseng and Jericho. Health care facilities or clinics of the three clusters render PMTCT programme services to the HIV-positive pregnant women. The context has the following environments:

- *Internal Environment* at the health sub-district level. The management officers interact with the Health Care Workers and the Non-governmental organisations (NGOs), and the Health Care Workers interact with the HIV-positive pregnant women in providing the services of the PMTCT programme.
- *External Environment* in the health sub-district clusters. PMTCT programme activities are carried out to the clinics or health care facilities and mobile clinic points. The external environment is also constituted by the community, family, partners or husbands and the children.

5.6.2 System characteristics (agent)

The system characteristics or the agents are the PHC managers and the Health Care Workers at the sub-district level. PHC managers consist of one sub-district manager and three assistant PHC managers. They oversee that the services of the PMTCT programme are rendered to HIV-positive pregnant women at all the health care facilities or clinics of Madibeng sub-district.

- **Health Care Workers**

Health Care Workers refer to persons who are involved in rendering the PMTCT programme services to the HIV-positive pregnant women and they include nurses, doctors, pharmacist assistants, M2M mentors and the lay counsellors. Other agents include primary health care managers, different programme coordinators and facilitators, human resource managers, emergency services managers and staff (paramedics) and sub-district health transport managers and drivers.

With regard to challenges experienced by service providers in PMTCT of HIV services in Adama town of Ethiopia (Asefa & Mitike 2014:1), recommend the designing of an

effective motivation strategy for service providers to enhance the status of PMTCT services. The authors concur with (Youngleson, Nkuruniza, Jennings, Arendse, Mate & Baker 2010:1), who used a combination of approaches to health systems strengthening to reduce transmission of HIV from mother to infant in a multi-facility public health system in South Africa despite the continuation of underperforming resulting in thousands of unnecessary HIV infections of new-borns each year.

- **Health Sub-District, its management and clusters**

The health sub-district management are the PHC managers who manage the Health Care Workers rendering the services of the PMTCT programme in the health care facilities or clinics of Madibeng sub-district. The three clusters are managed by the three assistant PHC managers and the sub-district manager oversees the whole sub-district regarding the rendering of the PMTCT programme services. The health care facilities or clinics and the mobile clinics fall under the clusters and they are managed by the PHC operational managers.

Transportation costs and lack of incentives for Health Care Workers working in remote rural and mining areas of the health sub-district should be addressed to make PMTCT programme available and accessible to HIV-positive pregnant women. Inadequate care providers, lack of prenatal care and weak health infrastructure were also identified by Kebaabetswe (2007:355) as barriers to participation in the PMTCT programme in Botswana.

Khunou (2010:1) indicated in her findings that management needs to establish a caring environment by displaying a caring attitude, respecting Health Care Workers and providing them with rewards to improve morale and performance. The above author conducted research on lived experiences of care givers while implementing the PMTCT programme as well as perceptions of Health Care Workers coordinating the PMTCT programme in a different Bojanala sub-district. The purpose was to gain a more thorough understanding of the support needed by caregivers during puerperium.

There is a shortage of nurses, doctors and pharmacists in all government institutions in South Africa. This has a negative impact on the delivery of care to patients. Patient numbers increases on a daily basis, and the workload is unbearable for Health Care

Workers, whose staff morale is dampened by the workload and the nature of their work (Raphela 2011:44).

- **Health care facilities rendering PMTCT programme services**

Health care facilities or clinics are the buildings and mobile cars (infrastructures) that render the PMTCT programme services to the HIV-positive pregnant women on daily basis. Different categories of Health Care Workers are allocated in these facilities by the sub-district PHC managers to offer the PMTCT programme services. Some clinics and the mobile clinics render five days PMTCT programme services whilst the health centres offer twenty four hour PMTCT programme services.

The layout and size of the facilities, including the consulting rooms, were not enough and parking areas and park homes were used, but had no privacy. Furthermore, the clinics were small but had to cater for many pregnant women in the maternity sides whose deliveries were not attended separately. Enough facilities should be built to accommodate the number of HIV-positive pregnant women. South Africa has the potential to save a substantial number of mothers and children's lives and, although there are some critical shortages of resources especially in the poorest rural areas, the challenge is to improve quality and productivity of existing resources (Chopra et al 2009:9).

Across a wide range of geographical settings, health facility factors were reported as barriers to the up-take of long-term HIV care and treatment services. These were similar to the factors affecting the uptake of PMTCT services and included: distance and cost of attending the clinic; long waiting times; general dislike of the facility; systematic gaps in referral processes; lack of faith in the health services and/or providers; being informed that services were not available when sought; and poor provider-patient interactions. The reasons underlying women's "general dislike" of health facilities or lack of faith in health services were often not elucidated in studies being undertaken (WHO 2013:12).

- **Antiretroviral (ART) drugs and test kits**

ART drugs are considered as system characteristics because the rendering of the PMTCT programme services depends on the ART drugs availability. The registered Health Care Workers including the doctors and the nurses prescribe the ART drugs for HIV-positive pregnant women and HIV-positive babies. The test kits are the equipments that the Health Care Workers use to counsel and test the pregnant women and the babies prior initiation of the ART drugs. Therefore, ART drugs and the test kits are important for PMTCT programme to be functional.

Enough antiretroviral drugs for the HIV-positive pregnant women should be in stock, in order to prevent the problem of out-of-stock medication. In addition, the hospital pharmacy should always have transport for delivering the ARVs to the health care facilities in order to overcome the problems and challenges of out-of-stock medication. HIV-positive pregnant women should be initiated on ARVs early before becoming sick so that they could respond better to the treatment.

Data on women's attitudes towards immediate initiation of lifelong HAART (PMTCT option B+) were categorically searched for in all articles in the review, but none of the articles included any insight into this area. However, denial and women "not feeling ready" to attend the HIV clinic, which emerged as barriers to accessing long-term HIV care and treatment services, might also be understood as a potential barrier to the immediate initiation of lifelong HAART (WHO 2013:15). In addition, a study in the United Republic of Tanzania found that 4/38 (11%) women had not attended an HIV clinic by delivery because they wanted to wait until after they had had their child, while a study in South Africa highlighted some women's aversion to ARVs during pregnancy for fear of harming their child (Stinson & Myer 2012:65; Watson-Jones, Balira, Ross, Weiss & Mabey 2012:7).

- **Transport services**

Transport services are considered as system characteristics because the rendering of the PMTCT programme services require transport every day. Transportation of ART drugs from the hospital pharmacy to the clinics is done through the provincial department of health vehicles that are stationed at the sub-district level. There are also

patient transport cars for referral of HIV-positive pregnant to the hospitals if further management is required. The ambulances are responsible for emergency transportation of HIV-positive pregnant women to the hospitals when the need arise.

HIV-positive pregnant women should have transport to take them to the nearest clinics and hospitals when the need arises. Access to proper roadworthy ambulances should remain a priority and a need for the HIV-positive pregnant women. The areas that do not have enough public transport and fixed clinics should be visited by the mobile clinics for purposes of rendering the services of the PMTCT programme to the HIV-positive pregnant women.

Delva, Yard, Luchters, Chersich, Muigai, Oyier and Temmerman (2010:584), suggest that transport fares or experience from previous pregnancies may have been a greater barrier to accessing services. Accelerating service decentralisation, particularly to rural areas, financing schemes such as provision of transport and service vouchers (Ekirapa-Kiracho, Waiswa, Rahman, Makumbi, Kiwanuka, Okui, Rutebemberwa, Bua, Mutebi, Nalwadda, Serwadda, Pariyo & Peters 2011:1), conditional cash-transfers (Largarde, Haines & Palmer 2007:298), or transport services provided by community members (Ekirapa-Kiracho et al 2011:1; Shehu, Ikeh & Kuna1997:2) may alleviate access issues.

Health facility factors such as long waiting times and cost of transport to the health facility emerged as a relevant factor of the health care milieu that affected women's experiences in PMTCT services (Ferguson 2012:566). In addition, transport between community and facility often imposes an immense and unaffordable expense (of both time and money) on pregnant mothers and other caregivers, making it difficult for mothers to continue using facility-based prevention of vertical transmission services (Marcos, Phelps & Bachman 2012:3).

5.6.3 Client characteristics (receiver or patient)

Outcomes are directly affected by the characteristics of the clients to whom the interventions are directed. Outcomes research has raised awareness in the research community on the extent to which it is necessary to adjust the variations in outcomes for differing states of client health, demographics and disease risk factors (Mitchell et al 1998:44). Such a view of potential agents suggests a correspondingly enlarged

theoretical notion of patient or recipient of activity. Under the theoretical notion of patient or recipient, all those persons or things who receive action from agents are included. The notion of “patient” then embraces not only the sick persons who receive the activity of the registered nurse or even of the other recognised agents, but also includes any person or thing that receives the activity of the registered nurse, or of any other agent whose activity contributes to the nursing goal.

- **HIV-positive pregnant women**

In the context of this study, the client characteristics include HIV-positive pregnant women who are enrolled on the PMTCT programme, reside in one of the three clusters of the health sub-district, are on third trimester of pregnancy, are between the ages of 18-49 years of age, and are regularly booked ante-natal clinic attendees. In order to avail and access the services of the PMTCT programme, HIV-positive pregnant women need guidance from the agent (Health Care Workers) in the form of strategies that are developed in this study. The recipient should possess certain characteristics that enable her to avail herself and access the services of the PMTCT programme, including adherence to the prescribed ARVs.

There is ample evidence corroborating that a substantial proportion of people living with HIV/Aids (PLHIV) continue to have children even after being diagnosed with HIV, regardless of the possible HIV transmission risks to their sexual partners and children. In the United States, 30% of infected women in Ohio State (Craft, Delaney, Bautista & Serovich 2007: 927), 55% of PLHIV in Louisiana (Bedimo-Rung, Clark, Dumestre, Rice & Kissinger 2005:1403) and 40% of PLHIV from the Southern USA states of Georgia, North Carolina and South Carolina (Sowell, Murdaugh, Addy, Moneyham & Tavokoli 2002:181) had been pregnant since their HIV diagnosis. In Brazil, 15% of HIV-infected women had at least one child post diagnosis (Nobrega, Oloveira, Galvao, Mota, Barbosa & Dourado 2007:261). In a cohort study of 306 HIV-positive women in Burkina Faso, the incidence of pregnancy was similar to the general population, despite the women having received counselling against pregnancy and provision of family planning services (Nebie, Meda, Leroy, Mandelbrot, Yaro, Sombie, Cartoux, Tiendreogo, Dao, Quangre, Nacro, Fao, Ky-Zebro, Van der Perre & Dabis 2001:367-372).

On the other hand, other studies have found that HIV-positive women who are aware of their status are less likely to want to have a child following an HIV diagnosis. In South Africa, the desire to be pregnant was significantly lower in HIV-positive women than those who were HIV negative (Peltzer, Chao & Dana 2008:973-979). In Uganda, only 7% of HIV-positive women desired to have a child (Nakayiwa, Abang, Packel, Lifshay, Purcell, King, Ezati, Mermin, Coutinho & Bunnel 2006:1). A New Orleans study has shown that HIV-infected women continue to have children but were less likely to do so than women of the same age in the general population (Bedimo, Bessinger & Kissinger 1998:1403).

5.6.4 Interventions (procedures)

In QHOM, clinical processes are direct and indirect interventions and related activities by which they are delivered. The processes are the methods that are adopted by the organisation to provide its services (Mitchell et al 1998:43). By its very nature a procedure is a general rule rather than a directive to a specified agent at a specified time and place. As an outline of activity, a procedure may specify the typical agent, recipient, and situation for the procedure as well as typical accomplishments of the procedure. So the procedure is not totally determinant of activity. One function of a procedure then is to provide detail sufficient to enable activity to be carried out; but a procedure may function too, as safeguard to agent, recipient, and organisation which encompasses the people and the activity. A suggested or prescribed pattern for arriving at some terminus may safeguard the doer by providing knowledge and hence lessening his liability to criticism from recipient or institution. And the recipient and the institution are similarly protected at least against certain aspects of an agent's ignorance (Dickoff et al 1968:430). The interventions or procedures include the following:

- **Advice, counselling and health education on infant/child feeding**

Infant/child feeding in the context of this study as an intervention affecting the PMTCT programme is supposed to be known by both the HIV-positive pregnant women and the Health Care Workers. Child feeding refers to safe infant feeding which are feeding practices that would lead to a healthy, well-grown, able, live, HIV-free child who has no underlying morbidity resulting from incorrect feeding practices. Exclusive breastfeeding refers to exclusive breast milk feeding, which is a feeding practice in which an infant

receives only breast milk and no other liquids or solids, including water, but may receive drops or syrups consisting of vitamins, mineral supplements, or medicines that are deemed necessary and essential for the child. When expressed milk is given, the preferred term is breast milk feeding (Department of Health [South Africa] 2010:iv-v).

Mixed feeding should be avoided altogether and exclusive breastfeeding for a period of six months should be practiced. The babies too, should be given the ARVs post-delivery and PCR test to be performed at six weeks post-natal care visit. This will prevent babies from becoming sick. The Health Care Workers should continue to health educate the HIV-positive pregnant women about the importance of exclusive breastfeeding for six months and adherence to the prescribed ARVs. Infant feeding counselling and support form an important component of the PMTCT programme. In the past HIV infected women were advised to choose between two infant feeding options, namely exclusive breastfeeding or exclusive replacement (formula) feeding. However, following the introduction of interventions to increase the safety of breastfeeding, exclusive breastfeeding is now the recommended option for HIV-infected mothers in South Africa, and health facilities should focus on ensuring that mothers adhere to the recommended ARV regimens and are supported to breastfeed (Department of Health [South Africa] 2010:iv-v).

Exclusive breastfeeding means that the child takes only breast milk and no additional food, water or other fluids (with the exception of medicines and vitamins, if needed) for six months. From six months of age, nutritious complementary foods should be added. In order to make breastfeeding safer, all HIV-exposed children should receive prophylactic nevirapine (NVP) from birth until six weeks of age. Children who are receiving ANY breast milk should continue taking NVP until all breastfeeding stops, unless the mother is receiving lifelong ART. Although it is generally advised that mothers breastfeed for two years, HIV-infected mothers (not on lifelong ART) should consider cessation of breastfeeding would compromise the nutritional status of the child, then the mother should be advised to continue breastfeeding until two years of age (and the child should continue to receive NVP) (Department of Health [South Africa] 2010:12).

South Africa has a national infant feeding policy that supports, protects and promotes exclusive breastfeeding. This policy is a lifesaver and is critical for the wellbeing of

many infants nationally. Exclusive breastfeeding during the first six months of life carries greater benefits than mixed feeding with respect to morbidity and mortality from diseases such as respiratory tract infections, allergies and gastrointestinal disorders and infectious diseases other than HIV (Department of Health [South Africa] 2003:4). Exclusive breastfeeding is a major factor in enabling many infants to survive the first year of life, especially those from low resourced areas where there are high incidences of morbidity and mortality from malnutrition and diarrheal diseases.

- **Support of Health Care Workers by sub-district management**

As an intervention for facilitating the availability and accessibility of the PMTCT programme, support should be provided to the Health Care Workers by the sub-district's health management. There should be monthly meetings in which the management affords the Health Care Workers a chance to articulate the challenges and problems they encounter when rendering the PMTCT programme services. The very same challenges and problems should be addressed and solutions found. There should be enough knowledgeable facilitators and staff, in-service trainings, monthly PMTCT programme meetings and routine on site visits to the clinics or health care facilities. The Health Care Workers should work as a multidisciplinary team in order to prevent being overworked and overloaded with work.

Lack of emotional, financial or physical support was another frequently cited barrier to PMTCT ARV uptake. Satisfactory support has been noted to improve PMTCT uptake. Support and disclosure are likely to become increasingly important in the context of "Option B+" (Gourlay, Birdthistle, Mburu, Lorpenda & Wringe 2013:10).

- **Support of HIV-positive pregnant women by Health Care Workers, family and community**

Cooperation and communication with families and communities need to be enhanced, and a health promotion/healthy "settings" model (WHO 2010) cited in Tlebere, Jackson, Loveday, Matizirofa, Mbombo, Doherty, Wigton, Treger and Chopra (2007:349) should be adopted as an integrated component of maternal and new-born services. Nurses and midwives should assure a family-based approach in their clinical care of pregnant women and new-borns, and expand their scope of practice beyond the health facility to

include community health promotion and support for community-based women's support groups.

There should also be support groups among the HIV-positive pregnant women, the Health Promoters, and the M2M mentors to take the lead in the running, facilitation and coordination of the very same support groups. Consideration or care should be taken to support HIV-positive pregnant women with a view to achieving the aims of the PMTCT programme. Appropriate counselling is ultimately the responsibility of the attending health care provider, and should be provided at all health facilities. Although the counselling could be delegated to a lay counsellor, the Health Care Workers remain responsible for overall psycho-social wellbeing of the HIV-positive pregnant women. Health Care Workers should be aware of local support organisations and resources, and refer HIV-positive pregnant women to these organisations whenever that is deemed appropriate (Department of Health [South Africa] 2010:16).

The PMTCT programme should also be integrated within existing ANC services because HIV-positive pregnant women require all components of routine antenatal care. These include: iron and folate supplementation; the provision of antiretroviral drugs for prophylaxis and treatment; the prevention and management of opportunistic infections; the modification of obstetric practices, especially during labour and delivery; integrating HIV management, especially 3-hourly AZT into the partogram as part of labour management; counselling on infant feeding options; and counselling on safer sex, family planning and contraception (National Department of Health [South Africa] 2010:16).

With regard to acceptance of their HIV status, it should be emphasised to the HIV-positive pregnant women during the pre- and post-test counselling sessions of ANC clinic so that the ARVs are taken as prescribed and accordingly in order to prevent HIV transmission to the unborn babies. Acceptance is emphasised, as HIV-positive pregnant women should be able to disclose their HIV-positive status and adhere to the prescribed ARVs. The community, family and partners of the HIV-positive pregnant women should also accept them as they are, and always be supportive. The latter necessarily enhances an atmosphere in which the women are at liberty to disclose their HIV-positive status.

Lack of partner or family support was frequently mentioned (Burke 2004:415; Duff, Kipp, Wild, Rubaale & Okech-Ojony 2010:13; Delva, Draper & Temmerrman 2006:706; Chikonde, Sundby & Martinson 2009:143; Kasenga, Hurtig & Emmenlin 2010:27; Theilgaard, Katzenstein, Chiduo, Pahl, Bygbjerg, Gerstoft, Lemnge & Tersbol 2011:28; O'Gorman, Nyirenda & Theobald 2010:354), while support was also a facilitating factor (Muchedzi, Chandisarewa, Keatinge, Stranix-Chibanda, Woelk, Mbizvo & Shetty 2010:38; Kasenga et al 2010:27; Theilgaard et al 2011:28; O'Gorman et al 2010:354; Awiti-Ujiji, Ekstrom, Ilako, Indalo, Wamalwa & Rubenson 2011:829). Couples voluntary counselling and testing (CVCT) was related to elevated adherence to/receipt of prophylaxis in three quantitative studies (Delvaux, Elul, Ndagije, Munyana, Roberfroid & Asimwe 2009:223; Peltzer, Mlambo, Phaswana-Mafuya & Ladzani 2010:699; Farquhar, Kiarie, Richardson, Kabura, John, Nduati & Mbori-Ngacha 2004:1620) although five studies found no weak evidence for an association (Albrecht, Semrau, Kasonde, Sinkala, Kankasa, Vwalika, Aldrovandi, Thea & Kuhn 2006:114; Barigye, Levin, Maher, Tindiwigi, Atuhumuza, Naibinge 2010:1163; Watson-Jones et al 2012:7; Kiarie, Kreiss, Richardson & John-Steward 2003:65; Msuya, Mbizvo, Hussain, Uriyo, Sam & Stray-Pedersen 2008:700).

The extent of community/partner support was another major factor affecting uptake of PMTCT ARVs, while cultural traditions including preferences for traditional healers and traditional birth attendants (TBAs) were also common. Key health-systems barriers were staff shortages, (fear of) scolding from staff, facility accessibility issues and non-facility deliveries (Gourlay et al 2013:8). Expanding PMTCT services to include other family members (for example in counselling) has also shown promise (Betancourt, Abrams, Mc Bain & Fawzi 2010:12) and may be particularly important for single women or those with unsupportive partners.

The nurses and the lay counsellors should conduct positive and non-judgemental health education classes and counselling sessions at the clinics or health care facilities for HIV-positive pregnant women. As a matter of maternal concern, the latter will prevent pregnancy risk behaviours such as unprotected sex, only noticing HIV status during first ANC booking, and also with pregnancy of the first born. The HIV-positive pregnant women should be educated on how to live with HIV and with the child, about taking the ARVs and the importance of eating well-balanced healthy food. Psychological stresses resulting from maternal concerns are exacerbated at the time of initial diagnosis, during

episodes of illness, and during the course of a terminal illness. In addition, counselling and psychosocial support are integral components of the holistic approach to caring for HIV infected pregnant women (Department of Health [South Africa] 2010:66).

The HIV-positive pregnant women should be counselled, tested, receive their results, and complete their ARV prophylaxis in order to alleviate HIV stressors. By so doing, their healthy pregnancies would be achieved through available life-saving PMTCT programme. In order for them to overcome the stressors, they should practice safe sex by always using condoms to prevent contracting more opportunistic infectious diseases during their pregnancies. Concerning delivering HIV free babies, HIV-positive pregnant women should comply and adhere to the prescribed ARVs. In a study conducted by Schroder (2007:1), the findings revealed that HIV-positive pregnant women's experience of pregnancy was characterised by significant emotional distress aggravated by fear of disclosing their status to their children and health care staff, uncertainty about the future, as well as having significant worry about their own and the child's health.

HIV-positive pregnant women should consider treating HIV as any other disease and take ARVs to protect their babies from being infected. In this manner, and by so doing, alleviation of stress would be greatly enhanced. Optimal ANC care for HIV infected pregnant women should be designed to prevent re-infection with HIV and re-occurrence of other diseases. The truism of the adage, "Prevention is better than cure" could not be over-emphasised in this regard. The more the PMTCT programme services are offered, the more the CD4 counts of the HIV infected women would increase and their viral loads would decrease. Another adage, "Practice makes perfect" becomes even more congenial, in that the more preventive measures are practised, the more used the sufferers (HIV-positive pregnant women) become to these measures (Schroder 2007:2).

Furthermore, HIV-positive pregnant women should be encouraged to disclose their status to the family, partners and the community. The latter should all be encouraged to desist from attaching stigmatising HIV-positive pregnant women. On the other hand, for the HIV-positive pregnant women to disclose their statuses, they should enroll and participate fully in the PMTCT programme. In order to improve their feeling of self-worth, these women should also avoid personalising stigmatisation by the community. By disclosing their status, HIV-positive pregnant women would obviate obstacles related to

delay and interruption of ARV in-take. On the other hand, the community should be encouraged to desist from stigmatising HIV-positive pregnant women. Some of them become so stigmatised to the extent of even discontinuing their attendance of the PMTCT programme. Stigma attached to HIV status and fear of disclosure to partners or family members (particularly grandmothers or mothers-in-law) were some of the major obstacles to the uptake of PMTCT ARV interventions in almost all of the qualitative studies reviewed (Gourlay et al 2013:6). Two quantitative studies reported associations between stigma measures and PMTCT ARV use (Kinuthia, Kiarie, Farquhar, Richardson, Nduati, Mbori-Ngacha 2011:14; Peltzer et al 2010:699), including self-stigma (also mentioned in qualitative research). Discrimination directed specifically at pregnant HIV-positive women (blame for potentially dying and leaving an orphaned child) was also described in a qualitative study in Kenya (Awiti-Ujiji et al 2011:829).

In quantitative studies, non-disclosure of HIV status to partners (or not informing them about NVP) was associated with non-attendance of the HIV clinic in Tanzania (Watson-Jones et al 2012:7), and non-ingestion of maternal or infant prophylaxis in South Africa (Peltzer, Mosala, Dana & Fomundam 2008:450; Peltzer et al 2010:699). The same phenomenon was also observed in Zimbabwe (Kuonza, Tshuma, Shambira & Tshimanga 2010:218) and among home births in Zambia (Albrecht et al 2006:114). Similarly, married women, or those living with a male partner, were less likely to use prophylaxis or access combination ART (cART) in three studies (Delvaux et al 2009:223; Ekouevi, Leroy, Viho, Bequet, Horo, Rouet, Sakarovitch, Welffen-Ekra & Dabis 2004:697; Muchedzi et al 2010:38). However, other studies and analyses demonstrated no evidence of an association between non-disclosure of HIV status and its influence on non-attendance of HIV clinics (Barigye et al 2010:1163; Stringer, Sinkala, Stout, Goldenberg, Acosta, Chapman, Kumwenda-Phiri & Vermund 2003:506; Kirsten, Sewangi, Kunz, Dugange, Ziske, Jordan-Harder, Harms & Theuring 2011:6; Peltzer et al 2010:699; Kiarie et al 2003:65).

Some qualitative research studies have confirmed that fear of disclosure could deter HIV-positive women from attending HIV clinics and initiating treatment (Varga & Brooks 2008 :786; Duff et al 2012:227-233; Painter, Diaby, Matia, Lin, Sibailly, Kouassi , Ekpini, Roels & Wiktor 2004:54; Stinson et al 2012:65; Chikonde et al 2009:143; Theilgaard et al 2011:28; Winestone, Bukusi, Cohen, Kwaro, Schmidt & Turan 2012:149); from ingesting or storing ARVs (Mepham, Zondi, Mbuyazi, Mkhwanazi & Newell 2011:741;

Duff et al 2010:37; Kasenga et al 2010:27; O'Gorman et al 2010:354; Laher, Cescon, Lazarus, Kaida, Makongoza, Hogg, Soon, Miller & Gray 2012:91); or from seeking/administering infant prophylaxis (Delva et al 2006:708; Kasenga et al 2010:27; Awiti-Ujiji et al 2011:829). Some women faced or feared negative reaction from their partners, including refusal to test for HIV, abandonment, or violence (Duff et al 2010:37; Duff et al 2012:227; Stinson & Myer 2012:65; Theilgaard et al 2011:28; O'Gorman et al 2010:354; Farquhar et al 2004:1620). Conversely, in one qualitative study, women who did not disclose their status were more likely to take their medication. These women were better accepted by their community and life could continue as normal, while those whose positive status was known faced stigmatisation (Awiti-Ujiji et al 2011:829).

- **Formal trainings and workshops about PMTCT programme by knowledgeable facilitators**

In order to elevate the state of formal trainings and workshops, facilitators of the PMTCT programme should be knowledgeable enough to disseminate correct and up-to-date PMTCT information to the Health Care Workers at the different clinics. The health sub-district management should also recruit and employ expert facilitators in the field of PMTCT programme on a regular basis.

The findings of a study conducted by Sarker et al (2009:287) on insights on HIV pre-test counselling following the escalation of the PMTCT programme in rural health posts of Burkina Faso, indicated that regular supervision with refresher training and focus on quality counselling would help health workers to enhance their performance and support them to comply with the PMTCT programme requirements. Furthermore, a demand for additional training and refresher in-service training to improve their performance as part of career development, could also accentuate a better service profile. More training and more support for quality PMTCT programme services was regarded as being of paramount importance.

It should be noted that HIV management is dynamic, and health care personnel need to keep abreast of the latest developments in their discipline and scope of practice. Knowledge of HIV and Aids is crucial at this point, and training therefore needs to be oriented in that direction. In the same mould as HIV and Aids workshops, PMTCT programme trainings are offered by the South African government HAST directorate or

an affiliated NGO that conduct trainings on behalf of the Department of Health and other stakeholders. New approaches to care and treatment keep changing, and Health Care Workers need to adapt correspondingly. There are new treatment guidelines that were released by the NDOH in April 2010, and it is the duty of the Health Care Workers to be familiar with new treatment protocols and regimen (Raphela 2011:25).

In a study conducted in rural Kenya concerning the facilitation of HIV status disclosure for pregnant women and partners, participants felt that home-based couples HIV counselling and testing (CHCT) would be acceptable for the rural setting, but special attention should be paid in the manner this service is to be introduced in the community in respect of confidentiality aspects and the training of Health Care Workers who will conduct the home visits (Walcott, Hatcher, Kwena & Turan 2013:1115).

In-serviced and trained Health Care Workers should mentor their colleagues who lack knowledge and skills in rendering the PMTCT programme services. Relevant, correct and up-to-date information and knowledge about the PMTCT programme should be applied and shared among the Health Care Workers, management and the facilitators. Health Care Workers should have confidence in implementing the PMTCT programme and refer to manuals/guidelines. When unsure of information, they should be confident to refer to the next level of care, such as the district hospital as an accredited site. The HIV-positive pregnant women should also receive health education and correct advice on the PMTCT programme. Health Care Workers should further be able to manage the side effects of the ARVs experienced by the HIV-positive pregnant women. Collaboration with the NGOs in order to get required information and tools of the PMTCT programme is of importance for use by the Health Care Workers in the clinics or health care facilities for the HIV-positive pregnant women. According to Practical Approach to Lung Health and HIV/AIDS in South Africa (PALSA PLUS), at the end of December 2011, the knowledge translation unit had trained, mentored, and supported 1,291 nurse trainers on PMTCT programme who in turn have trained 15,973 nurses in 1726 clinics across the nine provinces (PALSA PLUS 2012:1).

- **Site visits by sub-district managers and coordinators to offer MTCT programme in-service trainings and workshops**

During antenatal care visits, Health Care Workers should be totally encouraged to embark on serious follow-up efforts. HIV-positive pregnant women should be advised to be stable and take their antenatal clinic cards whenever they visit other clinics. Furthermore, there should be Health Promoters who could do home visits and door-to-door campaigns to trace the HIV-positive pregnant women who do not return for ANC follow-up. Outreach to couples and mobilisation in communities that are served by prevention programmes may complement measures at programme level by contributing to increased social support for women' efforts to prevent transmission of HIV from mother-to-child (Painter et al 2004:1-2).

In addition to media based approaches for disseminating prevention information, outreach focused on couples could provide women and their partners with opportunities outside antenatal settings where men are rarely seen to discuss and clarify their understanding of transmission of HIV from mother-to-child and options for prevention (Painter et al 2004:5).

Distances to health care facilities, the indirect and opportunity costs incurred are important factors influencing the availability and accessibility of the PMTCT programme in general. However, HIV-positive pregnant women are especially most vulnerable to exclusion due to physical and financial constraints when the distances are long and the cost high. PMTCT services are particularly affected by such exclusion because pregnant HIV-positive women who fail to make follow-up visits are more unlikely to receive and to adhere to ARV prophylaxis.

According to Theilgraad et al (2011:10), placing the care and treatment clinics (CTC) and in particular, its entrance in a discrete location to further increase its accessibility, is a necessary step toward encouraging HIV infected pregnant women to seek treatment. Several factors influencing a woman's ability to successfully navigate the PMTCT cascade (e.g. social support, stigma, disclosure of status, partner support) could not be adequately addressed by clinicians in healthcare settings alone and are arguably better addressed by personnel well-positioned to intervene at a community level (Theuring, Mbezi, Luvanda, Jordan-Harder, Kunz & Harms 2009:92; Kurewa, Kandawasvika,

Mhlanga, Munjoma, Mapingure, Chandiwana, Chirenje, Rusakaniko & Stray-Pedersen 2011:51). Programmes that do not extend beyond facilities and fail to engage lay staff will not be able to achieve the level of prevention of vertical transmission coverage required to approach new transmissions of HIV to children (UNICEF 2009:1; WHO 2010:1). In addition, the women most at risk of acquiring HIV and most in need of treatment may be the least able to access services (Marcos, Phelps & Bechman 2012:6).

- **Recruitment and employment of more health care workers to render PMTCT programme services**

The overall shortage of health care personnel is a chronic national and international health care problem affecting both the public and the private health sectors. A WHO report estimated that 4 million Health Care Workers were needed to combat the 'chronic shortage' globally (Capazorio 2006:10). For PMTCT programme services to be of a satisfactory and high standard, enough staff should be recruited and employed. Furthermore, HIV-positive pregnant women should spend reasonable time at the clinics and be discharged with the prescribed ARVs in their possession. The South African government stipulated that waiting times should be adhered to by different health care facilities.

According to a study conducted in Nigeria on the quality of antiretroviral therapy in public health facilities, de-motivated and inadequate Health Care Workers, long waiting time, and interrupted medicine supplies were among the identified quality gaps in ART service provision (Chiegil 2012:1). The author recommended that additional Health Care Workers should be deployed and trained, that ART be integrated into regular health services, that supply chain management of health commodities be improved, and that workloads be reduced in clinics. Ngidi et al (2013:133-139) affirm that despite the availability of key resources and medications, antiretroviral treatment rates for pregnant women in South Africa remained low. The authors further reported that a targeted campaign among health workers could accelerate access to antiretroviral therapy for pregnant HIV-infected women.

5.6.5 Facilitation of resources and support by management of the sub-district

In this study, the dynamics refer to the motivating factors that facilitate resources at the health sub-district level. The health sub-district management should support the Health Care Workers rendering PMTCT services to HIV-positive pregnant women. The involvement of the Health Care Workers in some aspects such decision making with regard to the availability and accessibility of the PMTCT programme is of paramount importance. Motivating factors include capacity building and resource building for effective and sustainable PMTCT programme. Health Care Workers should be trained and refresher trainings should be offered on an ongoing basis. Practical sessions should be organised on a continuous process as well. The site support of the Health Care Workers by the sub-district management should provide regular mentoring about PMTCT the programme.

The key factors for effective PMTCT programme include capacity building and regular mentoring of nurses, routine assessment of the quality of care provided, full integration of PMTCT care components into MCH services, strengthening of CD4 testing capacity at district level, reorganising of services at site level with an emphasis on effective linkages between PMTCT and ART services, and the high level commitment and leadership of the government to improving maternal and child survival, including virtual elimination of pediatric infection (Tsague, Tsioris, Carter, Mugisha, Tene, Nyakesha, Koblavi-Deme, Mugwaneza, Kayirangwa, Sahabo & Abrams 2010:7).

5.6.6 Outcomes/end results of procedures

In order to capture the contribution of nursing interventions and a care delivery system to patient well-being, Mitchell et al (1998:43) propose that outcome measures should be based on care structures and processes that integrate functional, social, psychological, physical and physiologic aspects of people's experiences in health and illness. In relation to QHOM, care structures and processes are defined by the system characteristics and the interventions thereof. In relation to the Survey List by Dickoff et al (1968), care structures and procedures are defined by the agents and the procedures of the particular system. According to Mitchell et al (1998), outcome measures are defined within five domains: achievement of appropriate self-care, demonstration of health promoting behaviours, health-related quality of life, perception of being well

cared for, and symptom management. In this study, the outcomes are defined by the effectiveness of a PMTCT programme that is available, accessible and sustainable to meet the needs of HIV-positive pregnant women. In this manner, the quality of life of HIV-positive pregnant women will be improved. The outcomes or end results of procedures of PMTCT programme will be indicated by the following aspects below:

- **Effective PMTCT programme that is available, accessible and sustainable**

The outcome of the PMTCT programme needs to be effective meaning that it should be available, accessible and sustainable to meet the needs of HIV-positive pregnant women. This was indicated in the purpose of this study in Chapters 1 and 3, which was to determine the availability and accessibility of the PMTCT programme with the aim of developing relevant and effective strategies to facilitate the availability and accessibility of the PMTCT programme to HIV-positive pregnant women in the Bojanala Health District.

When accessible and implemented optimally, PMTCT programming represents one of the greatest achievements to date in HIV prevention efforts (WHO 2010). While medical advances have nearly eliminated paediatric HIV in some regions, their translation into practical success in resource-constrained settings remains a challenge. Improvements in PMTCT systems will be necessary to achieve the 2015 millennium development goal of reducing childhood mortality to two thirds of 1990 levels (United Nations Statistics 2010:1). In the context of free and comprehensive PMTCT strategies in South Africa, there is an urgent need to examine reasons for PMTCT failures and contextualise accessibility and adherence challenges faced by HIV infected mothers of HIV-infected infants (Laher et al 2011:92). Appropriate access of healthcare is often limited by inadequate understanding of key elements of HIV and prevention of vertical transmission among expectant mothers as well as insufficient sensitisation of health caregivers or providers of all levels (Marcos et al 2012:2).

- **Empowered HIV-positive pregnant women**

Empowered HIV-positive pregnant women should be aware of the PMTCT programme and make use of it. Through attendance of the ANC clinics and support groups, the

HIV-positive pregnant women should be empowered on how to live positively with HIV and their babies post-delivery.

The findings of a cross-sectional study by Teasdale and Basser (2008:60) on enhancing PMTCT programmes through psychosocial support and empowerment of women using the M2M model of care revealed that the involvement of mentor mothers in the M2M programme in South Africa was associated with improved maternal uptake of treatment and higher rates of prophylaxis for infants. Specifically, facilities employing mothers from surrounding communities to provide education and support for HIV-positive pregnant women achieved significantly improved rates of maternal (93% vs. 83%; p<0.01) and infant (88% vs. 78%; p<0.05) nevirapine coverage compared to non-supported sites. Theilgaard et al (2011:10), mention that it is necessary to encourage HIV-positive pregnant women to seek treatment. Furthermore, they could be assisted to form empowering relationships through post-test peer groups that convene in settings other than the CTC.

In a study on qualitative interviews with mentor mothers living with HIV in relation to potential impacts of role and coping strategies, the findings indicate that the inclusion of peer mentors comes with certain responsibilities. While the mentors were resilient and some found the experience therapeutic and empowering creative ways to cope with secondary trauma, the negative implications could not be ignored. In order to deliver an effective mentor-driven intervention to mothers enrolled in a programme to prevent vertical transmission, the possibilities of secondary trauma should be considered and mentors provided with ongoing counselling, training on coping skills and regular debriefing sessions (Dlamini, Knight, Van Rooyen, Van Heerden & Rotheram-Borus 2012:1).

M2M mentors were trained in support and cognitive behaviour interventions and conducted sessions with mothers living with HIV on a curriculum including supportive mentorship, coping with stigma, avoiding negative emotions, infant feeding practices, partner disclosure, safe sex practices, family planning and pre-and-post-delivery care of their infants (Futterman, Shea, Besser, Stafford, Desmond, Cumulada & Greco 2010:1093). According to Marcos et al (2012:5), the involvement of M2M or mentor mothers in education and support for HIV-positive pregnant women was associated with a higher HIV knowledge score six months post-delivery. The latter authors further

reflected that that a key component of Zimbabwe's national initiative for prevention of vertical transmission incorporates education, advocacy and community mobilisation campaigns. Laher et al (2011:97), highlighted that counselling should concentrate more on empowering pregnant women to be aware of their CD4 count and advocate for correct PMTCT ARV prescription. Educational materials about early PMTCT and infant feeding clearly need wider dissemination.

- **Knowledgeable Health Care Workers about PMTCT programme**

Training of the Health Care Workers about PMTCT programme should be on a continuous basis because information on PMTCT programme is updated also on a continuous basis. The PMTCT programme services will then be rendered by well informed workers and the HIV-positive pregnant women will receive high standard quality of care.

Training and supervision of programme staff may increase the likelihood of positive interactions between staff and clients, thereby facilitating women's participation in preventing transmission of HIV from mother-to-child (Painter et al 2004:1). Sarker et al (2009:287), mention that regular supervision with refresher training and focus on quality counselling would help health workers to enhance their performance and support them to comply with the PMTCT programme. Furthermore, a demand for additional training and refresher in service training to improve their performance which is part of career development and could also motivate to offer better service was highlighted. More training and more support for quality PMTCT programme services is also of paramount importance.

At the individual-level, poor knowledge could be addressed through counselling and educational strategies. However, authors occasionally noted educational efforts had made little impact on service use. Interactions between mothers and health-provider through toolkits, training and, supervision, should be promoted to allay fears of negative staff reactions and to capitalise on facilitating effects of trust in staff. Confidentiality and privacy issues could be addressed by optimising facility layout (Gourlay et al 2013:9).

- **Treatment adherence by HIV-positive pregnant women**

Treatment adherence by HIV-positive pregnant women needs to be or should be through full enrolment and involvement in PMTCT programme service. Maternal non-adherence was associated with home births, low levels of high school education, and low new-born birth weight. Among those who took nevirapine, home birth and low birth were associated with taking the drug too close to delivery. Failure to administer nevirapine to the new-born was significantly associated with birth at the tertiary hospital, lower 5-minute Apgar scores and neo-natal death. Other factors investigated were not associated with maternal or new-born non-adherence. Such factors included disclosure of HIV status to one's partner, couple HIV testing, gestational age at nevirapine dispensing, maternal age, parity, history of death of a previous child, and low CD4 cell count; socioeconomic markers, including food security, source of water, and maternal and paternal employment (Albrecht et al 2006:116).

Excellent adherence to single-dose NVP for PMTCT could be achieved. Non-adherence seems to be influenced by place of birth and by poor health status of the new-born. Procedures to ensure that viable, yet ill, neonates receive nevirapine, should be part of clinical protocols and training within PMTCT programmes (Albrecht et al 2006:114). Access to antiretroviral treatment and other programmes to support those living with HIV need to be expanded and integrated with the full spectrum of maternal, child and women's services. In resource-poor settings, nurses and midwives will have to become front-line providers of antiretroviral treatment for mothers and infants, suggesting a need for both expanded nursing and midwifery clinical training and scope of practice (Tlebere et al 2007:349).

Laher et al (2011:96), recommend that PMTCT ARV interventions, as well as cotrimoxazole prophylaxis which has been shown to decrease preterm delivery amongst immune-compromised HIV-infected pregnant women (WHO 2010) should be initiated as soon as possible in pregnancy to maximise their opportunity for benefit. Earlier short course maternal AZT (scAZT) initiation from 14 weeks gestation, has been embraced in the South African 2010 PMTCT guideline revision (National Department of Health [South Africa] 2010:1). Farquhar et al (2012:1), argue that even with greater availability of intervention to protect infants from HIV-1 acquisition, many women choose not to receive their HIV-1 test results, and many who learn that they are HIV

infected do not implement interventions to prevent vertical transmission. In both research and non-research settings, less than 75% of HIV-infected pregnant women who are tested learn their HIV-1 status and less than 50% of these women obtain antiretrovirals to prevent mother-to-child HIV-1 transmission or use condoms postpartum.

A pre-intervention study by Kgatlwane, Madaki, Ogenyi, Moyo, Ekezie and Moroka (2006:75-79), which reported an optimal adherence rate of 75% by pill count, 60% by virtual analogue scale, and 96% by a two day pre-interview adherence recall, all show that pregnant women on PMTCT may have better adherence levels to antiretroviral treatment than other populations on HAART in Botswana. This may be because pregnant women on PMTCT are highly motivated to adhere to their medication, and keen to prevent vertical transmission to their children.

Ochigbo (2013:28), attests that HIV infected women in Botswana were consistent in taking their ARV drugs as directed. They all believed that anti-HIV medication prevent HIV transmission to child if well taken, and two of them were not sure if anti-HIV medication not taken exactly as directed will result in the HIV in one's body to become resistant to ARV medication. Ngidi et al (2013:133), elucidate that highly effective ARV drug interventions are available to reduce peri-natal HIV transmission rates among infants to less than 2%, even in resource-limited settings. Identifying eligible HIV-infected pregnant women and starting them on ART is therefore likely to have major public health benefits.

Introduction of fixed dose combination (FDC) was rolled out in South African health care facilities on 01 April 2013. The FDC ARV is one ARV pill which contains tenofovir (TDF), emtricitabine (FTC), efavirenz (EFV) and HIV-infected women of childbearing age were considered in this regard. All pregnant HIV-positive women, regardless of their CD4 cell count, are initiated on a FDC on the same day that they are diagnosed HIV-positive or within seven days. There is no need to wait for the CD4 and creatinine results before initiation (Updates on Revised Antiretroviral Treatment Guidelines 2013:1). Frontline Health Care Workers need to know about the changeover to FDC ARVs, how it impacts on them and specifically pregnant and breastfeeding women (Department of Health [South Africa] 2013:1).

5.6.7 Terminus

The end of the conceptual framework will be developed strategies to facilitate the availability and accessibility of the PMTCT programme. These will be fully described in Chapter 6.

5.7 CONCLUSION

The QHOM and the Survey List presented a practical guide for developing strategies to facilitate the availability and accessibility of the PMTCT programme based on the experiences of the HIV-positive pregnant women and the experiences of the Health Care Workers. Thus, there is a continual need to conceptualise the agents, recipients and the mode of intervention and the outcomes at an individual, group, or population level. What begins to emerge here too is that exploring any of the six aspects of activity lends inevitably to touching on some of the others of the six. This chapter is the most crucial one, because it created a framework for facilitation and development of the strategies, which are the goals of this study.

CHAPTER 6

STRATEGIES FOR FACILITATION OF THE AVAILABILITY AND ACCESSIBILITY OF THE PMTCT PROGRAMME FOR HIV-POSITIVE PREGNANT WOMEN

6.1 INTRODUCTION

In Chapter 5, the conceptual framework for developing strategies was discussed. In this chapter, the strategies for facilitation of availability and accessibility of the PMTCT programme for the HIV-positive pregnant women are presented. The strategies are based on the findings of this study, which are the experiences of HIV-positive pregnant women and those of Health Care Workers in the Madibeng Health sub-district. In this chapter the strategies to facilitate the availability and accessibility of the PMTCT programme for the HIV-positive pregnant women will be described and discussed.

Strategies for facilitation of the availability and accessibility of the PMTCT programme were developed in order for the Health sub-district to be aware of the programme's situation and act accordingly for the benefit of the HIV-positive pregnant women. The development is directed towards increasing resources and opportunities, minimizing resistance and barriers, reach those affected by accessing available services and advocating for the needed PMTCT services. The strategies will also assist to collaborate in public health problems solving related to PMTCT and social support to those most affected (HIV-positive pregnant women) and those most responsible (Health Care Workers). Furthermore, the developed strategies can assist in the development and distribution of policies that will assure availability and access to PMTCT programme services.

6.2 STRATEGIES FOR FACILITATION OF THE AVAILABILITY AND ACCESSIBILITY OF THE PMTCT PROGRAMME

A strategy refers to “a method or plan chose to bring about a desired future, such as achievement of a goal or solution to a problem” (<http://www.managementstudyguide.com>).

[com/swot-analysis.htm](http://www.com/swot-analysis.htm)). A strategy is further regarded as an action for achieving the desired goals. A strategy is concerned with issues that have not been addressed before in the same form (<http://wwwEzineArticles.com>). From the results in Chapter 4, it is evident that there is a need to improve the availability and accessibility of the PMTCT programme for HIV-positive pregnant women. The aim of developing the strategies is to facilitate the availability and accessibility of the PMTCT programme in order to make the programme sustainable, meet the needs of HIV-positive pregnant women and improve their quality of lives.

6.3 DEVELOPMENT OF STRATEGIES

Based on the findings of the participants' experiences in Chapter 4 and the conceptual framework in Chapter 5, the strategies to facilitate the availability and accessibility of the PMTCT programme will be developed. Muller, Bezuidenhout and Jooste (2011:57), define a strategy development as based on a process of trustworthy consultation by drafting the particular process and redefining it with the stakeholders involved.

The development of the strategies formed part of Phase 3 of this study. Strategies were developed from the findings of the study and the conceptual framework. It involved combining and synthesising the results from Phase 1 to reach the outcome of this study which was to develop strategies to facilitate the availability and accessibility of the PMTCT programme. The experiences explored and described in Phase 1 and the needs identified by the participants included a range of suggestions and comments which were later transformed into themes. This led to the scope and objectives of the strategies being determined and clarified.

Strategy statements were formulated, provided with rationale to support their existence and also presented with related actions. The proposed strategies were submitted to a group of expert evaluators for evaluations and recommendations. Thereafter, they were validated before being finalised. Final strategies were developed following recommendations on the validated proposed strategies.

6.4 DESCRIPTION OF THE STRATEGIES

Availability and accessibility of the PMTCT programme services will ensure that goals set by the government will give direction to a multi sectoral approach commitment between the Departments of Health, Transport, Education, Social Development and Public Works. With each department's uniqueness, there should be good working inter-departmental relationships, in order that the PMTCT programmes are made available and accessible. In this study, nine strategies were developed focusing on the availability and accessibility of the PMTCT programme. Below is the description of the strategies.

6.5 STRATEGIES TO FACILITATE THE AVAILABILITY AND ACCESSIBILITY OF THE PMTCT PROGRAMME

Each of the following strategies is based on the identified themes and the developed conceptual framework, and consists of a rationale and actions. The reason for the basement is for the strategies to target both the HIV-positive pregnant women and Health Care Workers as indicated in figure 5.1. For each identified strategy, actions were discussed with the information obtained from the evaluation.

Strategy for Theme 1: Acceptance of one's sero-positive status

6.5.1 Strategy 1: Promote regular site visits to motivate and support Health Care Workers and HIV-positive pregnant regarding the services rendered and enrolment in the PMTCT programme

6.5.1.1 *Rationale*

The health sub-district management should visit the clinics or health care facilities regularly in order to monitor and evaluate the progress of the PMTCT programme. The Health Care Workers and HIV-positive pregnant women should feel valued as providers and consumers in the availability and accessibility of the PMTCT programme. Consistent, accurate and regular support should be offered and practiced by the health sub-district's managers, who should visit the clinics regularly in order that they could identify and strengthen the weak or missing links in the provision of the PMTCT programme services.

6.5.1.2 Actions

The following actions are linked to Strategy 1 above.

- Motivate and inspire the Health Care Workers rendering services of the PMTCT programme through appreciation of the care they render to HIV-positive pregnant women.
- Encourage HIV-positive pregnant women to continue to disclose their HIV-positive status to sexual partners and act to prevent new sexual transmission or reinfection.
- Encourage motivation and focus on improving the PMTCT programmes' availability and accessibility through community mobilisation groups that should continue to encourage HIV-positive pregnant women and public figures like politicians and celebrities to go public about their HIV-positive status.
- Scale up PMTCT services and ensure that they are accessible, welcoming and of good quality in order to reduce further vertical transmission.
- Implement effective communication programmes such as condom usage and HIV re-testing with focus on increasing HIV-positive pregnant women knowledge about PMTCT programme.
- Develop public awareness of PMTCT programme that can mobilize HIV-positive pregnant women and the community to enrol and participate in order to improve and sustain the current level of services.
- Provision of mentorship supervision to the facilities, ensuring regular staff appraisal for work well done and use of patient satisfaction to encourage staff during visits.
- Encourage and reinforce HIV-positive pregnant women to continue with enrolment in the PMTCT programme as an effective way of improving their health status in general.
- Promote and appreciate Health Care Workers' mastery skills in rendering quality PMTCT programme services by offering them the opportunities to develop colleagues in other health sub-district clusters.
- Design on-going campaigns and community dialogues to encourage HIV-positive pregnant women to enrol in the PMTCT programme.

- Allow Health Care Workers to raise concerns and challenges with regards to PMTCT programme availability and accessibility during their monthly meetings.

Strategy for Theme 2: Maternal concerns

6.5.2 Strategy 2: Improve adherence to antiretroviral treatment by HIV-positive pregnant women through full enrolment and involvement in the PMTCT programme services

6.5.2.1 *Rationale*

Antiretroviral treatment is one of the main focuses of PMTCT programme of HIV and AIDS. However, this alone will not make a difference in reducing the rate of MTCT of HIV infection. Continuity of treatment at home needs to be supported by the family and community to ensure compliance and adherence to treatment. To realise the benefits of HIV transmission risk reduction, PMTCT of HIV and AIDS programmes should achieve adherence to antiretroviral drug prophylaxis. Evaluation of many PMTCT of HIV and AIDS programmes, however, reveals that adherence is still a challenge affecting the effectiveness of the programmes.

6.5.2.2 *Actions*

The following are the primary actions associated with Strategy 2 above.

- Encourage, educate and empower HIV-positive pregnant women to comply with antiretroviral treatment and follow-up visits because of advances in treatments.
- Improve HIV-free infant survival and maternal survival by optimising initiation of HAART during pregnancy and breastfeeding.
- Practice test and treat strategy for HIV-positive pregnant women as recommended in the revised WHO guidelines (option B plus lifelong HAART).
- Eliminate new HIV infections among children by 2015, and substantially reduce AIDS-related maternal deaths through the use of pregnancy registry (pharmacovigilance and adherence) and practice of mom-connect.

- Educate HIV-positive pregnant women about reminder strategies that could help them to adhere to antiretroviral treatment such as radio, TV programmes, and mom-connect cell phones or alarm clocks.
- Enlist the help of partners, family, friends, peers, support groups in the community, the church and allied Health Care Workers to reinforce adherence to antiretroviral treatment by the HIV-positive pregnant women.
- Iron out PMTCT programme problems in order to reduce new HIV cases and reinfection of HIV-positive pregnant women.
- Promote maximum availability and accessibility of the PMTCT programme by posting notes, pamphlets on bulletin and notice boards that are accessible, strategically placed and visible to Health Care Workers and the HIV-positive pregnant women.
- Integrate PMTCT programme services into reproductive health and mother-child and new-born services in improving antiretroviral treatment uptake and survival outcomes.
- Provide health education by Health Care Workers on PMTCT programme benefits with special emphasis on HIV-positive pregnant women in order to increase their knowledge of prevention of HIV to their children.
- Provide PMTCT programme awareness campaigns to staff at health facilities and to communities regularly. Awareness should include education, advocacy and community mobilisation.
- Explore the experiences/challenges of HIV-positive pregnant women by discussion of topics related to the availability and accessibility of the PMTCT programme in support group meetings.
- Manage HIV among HIV-positive pregnant women by preventing opportunistic diseases and provision of key health information about PMTCT programme benefits for both the mother and the child.
- Empower HIV-positive pregnant women and the community at large to test and re-test for HIV prior conceiving.
- Mobilise and promote community awareness, involvement and support for PMTCT programme services in order to prevent barriers (such as late adherence and non-adherence to ARVs, loss to follow up (LTFU), stigmatisation, discrimination and males not being involved to the delivery and use by the HIV-positive pregnant women.

- Emphasize the importance of early treatment of symptomatic STIs in order to contribute to a direct reduction of the HIV incidence.
- Negotiate for increment of mass media coverage campaigns related to PMTCT programme such as Khomanani and Love Life to be available to HIV-positive pregnant women.
- Advise and offer the opportunity for HIV-positive pregnant women by means of health talks to plan for their children and future pregnancies.
- Encourage HIV-positive pregnant women to enroll in PMTCT programme so that pediatric HIV could become an insignificant problem.
- Expand and strengthen services of quality antenatal care, family planning, voluntary counselling and testing for HIV-positive pregnant women and their partners.
- Implement effective policy to render PMTCT programme services by competent skilled Health Care Workers.

Strategy for Theme 3: Stressors about HIV status

6.5.3 Strategy 3: Sustain and enhance information system with regard to rendering the PMTCT programme services

6.5.3.1 *Rationale*

HIV-positive pregnant women should use counselling services during their first and subsequent ANC clinic follow-ups. Psychological support from peers such as the M2M mentors that provide a clinic-based, peer-support programme should be encouraged and adhered to. This will assist the HIV-positive pregnant women to follow the recommendations and advices with regard to PMTCT programme. New and innovative research ideas are needed to inform the Health sub-district programmers about barriers and facilitators to uptake of PMTCT services. The quality of the existing PMTCT programme workforce should be improved through continuous attendance of counselling courses in order to eliminate MTCT.

6.5.3.2 Actions

The following actions are based on elements of Strategy 3 above.

- Encourage involvement of HIV-positive pregnant women in ‘mom-connect’ project so that they could be able to register their cell phone numbers and be given advices as per their gestational ages and HIV status conditions.
- Place special emphasis on the emotional and psychological needs of HIV-positive pregnant women in order to contribute to the improvement of their holistic quality of life.
- Counsel HIV-positive pregnant women to be aware of possible side-effects of the ARVs when they immediately appear or occur so that action plans like treatment could be made by the Health Care Workers.
- Encourage HIV-positive pregnant women to find treatment supporters such as treatment clubs, ward based outreach team supporters (WBOTS) and direct observed treatment supporters (DOTS) for confidentiality purposes. The WBOTS and the DOTS could always remind the HIV-positive pregnant women to take antiretrovirals as prescribed by the doctors and nurses.
- Address the maternal emotional concerns of the HIV-positive pregnant women in the clinics through individual therapies, group therapies and support groups that can allow them to receive PMTCT services in totality.
- Issue invitation cards for HIV-positive pregnant women in the form of STIs’ contact slips to enhance partner involvement in the PMTCT of HIV.
- Emphasise the need for further integration of services to PMTCT of HIV and other opportunistic infections.
- Educate about provider attitudes regarding childbearing and knowledge of safer conception.
- Arrange counsellors to provide HIV-positive pregnant women with more PMTCT programme information should possible social and psychological implications occur.
- Provide pre and post test counselling to HIV-positive pregnant women to enable them availability and access to ARVs.

- Train as many Health Care Workers as possible on the PMTCT programme in order to offer continuous counselling, emotional and psychological support to HIV-positive pregnant women by means of workshops and seminars.
- Empower HIV-positive pregnant women to seek information related to when they should complete blood tests and how and when to take the ARVs.
- Empower HIV-positive pregnant women to take care of themselves by not defaulting or interrupting the prescribed ARVs.
- Encourage HIV-positive pregnant women to adhere to the prescribed ARVs in order to survive longer and improve their qualities of life.
- Ensure that PMTCT programme is also adherence programme and patients are able to manage their health appropriately.
- Revitalise PMTCT programme services towards strengthening its care so that it becomes more preventive than ever before.
- Improve services of the PMTCT programme through provision of reasonable quality health care delivery circumstances.
- Attend to all HIV-positive pregnant women by not returning them back home without assistance because it is unethical to do so.
- Address issues surrounding waiting times, drugs availability and accessibility in order to improve and sustain the current PMTCT programme.
- Involve and encourage male partners to support their partners' uptake of adherence to PMTCT programme care.
- Involve family and community in PMTCT services to avoid stigmatization and network in order to scale up the programme.
- Provide couples with different options for assistance with HIV disclosure such as couples HIV counselling and testing (CHCT).
- Emphasize the importance of CHCT so that it can be acceptable in the rural setting and pay attention on how this service can be introduced in the community.
- Encourage home-based approaches in order for the HIV-positive pregnant women to bring their partners to the clinics for PMTCT services.

Strategy for Theme 4: Lack of and shortage of resources

6.5.4 Strategy 4: Recruit, develop and retain Health Care Workers and increase ARVs stocks and test kits in order to render the PMTCT programme services in the health sub-district

6.5.4.1 *Rationale*

For the PMTCT programme to be facilitated and improved, additional or allocation of human, financial, material resources and protocol changes, are among the priorities for its availability and accessibility. The dedicated, determined, devoted and disciplined Health Care Workers are among the important aspects that affect PMTCT programme's availability and accessibility in the health sub-district. This promotes decision-making and buy-in of the Health Care Workers on issues that affect the PMTCT programme services.

Well-developed strategies to overcome shortage of resources in rendering of the PMTCT programme services should promote adequate antiretroviral drugs and test kits for provision of quality PMTCT programme services. Out of stock antiretroviral drugs should be avoided at all costs. The clinics or health care facilities in-stock drugs and test kits should be able to accommodate the numbers of the HIV-positive pregnant women. The main aim of the PMTCT programme is to improve pregnant women's quality of life by ensuring that they experience fewer or no HIV related illnesses.

Due to the existing shortage of the antiretroviral drugs and test kits, the ideal of buying, ordering and transportation or delivery of the ARVs would be of paramount importance. There should be good procurement processes in place, memorandum of understanding (MOU) or agreement contracts with the manufacturers of the ARVs and health depots to have buffer stock. The minimum and maximum stock levels for the health care facilities should be identified and adhered to when ordering ARVs. Therefore, each HIV-positive pregnant woman should have a record of ARVs used per month to assist the operational managers to account for the stocks used.

The rapid and effective referrals between PMTCT and MNCWH programmes should enable HIV-positive pregnant women during delivery time to start antiretroviral therapy,

which will reduce antenatal transmission and likely postnatal transmission as well. All pregnant women testing HIV-positive should be given ARVs on the same day by the health facilities which diagnosed them as HIV-positive. The health facilities should also initiate the HIV-positive pregnant women on ARVs FDCs.

6.5.4.2 Actions

The following are the primary actions associated with Strategy 4 above.

- Appoint competent, experienced and multi-tasked Health Care Workers who acquired knowledge, skills and attitudes needed for rendering integrated services of PMTCT/MNCWH for HIV-positive pregnant women.
- Give attention to increase nurses, doctors, social workers, and pharmacists to meet the needs of the HIV-positive pregnant women with regard to availability and accessibility of the PMTCT programme.
- Capacitate a number of nurses in the clinics to prescribe and dispense ARVs to HIV-positive pregnant women.
- Open the closed two roomed structured clinics in the Health sub-district to operate daily in order to expand roll-out of ARVs to HIV-positive pregnant women.
- Support Health Care Workers in coping with workload through recognition of the importance of more proactive Health sub-district initiatives such debriefing sessions.
- Put-in-place measures to reduce overcrowding and staff shortages such as extension of hours for clinics that do not offer 24 hour services.
- Increase the number of mobile clinics and PMTCT programme Health Care Workers to render the extended services to remote rural and mining areas of the sub-district.
- Make use of task-shifting by reorganizing the workforce in the clinics for effective use of the current available human resources.
- Negotiate for payment of rural allowance and budget for payment of overtime in order to allocate more Health Care Workers in the clinics to render PMTCT services to HIV-positive pregnant women.

- Reduce the extra workload of PMTCT services experienced by the Health Care Workers by filling the vacant posts.
- Provide a working environment where sufficient medical supplies such as ARVs are at hand in order for the Health Care Workers to give quality PMTCT programme service to the HIV-positive pregnant women.
- Promote the competency of Health Care Workers through regular supervision and support by PMTCT programme managers, coordinators and the regional training centre coordinators (RTCs) in rendering the services of the PMTCT programme to the HIV-positive pregnant women.
- In-service, train and workshop Health Care Workers, PMTCT programme coordinators and managers, pharmacists, social workers, Health Promoters, mother-to mother mentors and lay counselors on the PMTCT programme in order to yield satisfactory and implementable results.
- Reduce unbearable workloads and improving staff morale by considering the issue of incentives in remote rural, farming and mining areas of the health sub-district.
- Distribute Health Care Workers allocated in the health care facilities in relation to the workload they have, in order that they could provide quality PMTCT programme services.
- Increase the number of understaffed PMTCT human resources with the training of additional Health Care Workers, in order to provide HIV-positive pregnant women with adequate updated information and skills living with HIV/AIDS.
- Convene monthly meetings such as maternal mortality and perinatal mortality meetings where interactions and discussions regarding PMTCT programme availability and accessibility could take place.
- Develop and maintaining effective communication and coordination with Health Care Workers to ensure clarification of ideas with regard to the national policy of the PMTCT programme.
- Give opportunities for feedback and communication between Health Care Workers and health sub-district management so that information obtained at workshops and trainings could be disseminated amongst all staff rendering the services of the PMTCT programme. Also, offering Health Care Workers the opportunity to question, raise queries and give feedback on their experiences regarding the PMTCT programme.

- Avail the policies and guidelines of the PMTCT programme in all the health care facilities of the health sub-district for reference and adherence by the Health Care Workers.
- Employ and develop coordinators, facilitators and trainers of the PMTCT programme to act as change agents/professionals with skills that will enable them to accomplish change effectively.
- Train Health Care Workers on clinical assessment and building or expanding laboratory capacity to evaluate eligibility for HAART and monitoring of treatment for PMTCT of HIV-positive pregnant women.
- Document and keep record of antiretroviral drugs and test kits in drug registers and testing registers.
- Provide sufficient, well-maintained and relevant test kits by negotiating with management and supplies on provision of upgraded or the most recent kits for PMTCT programme.
- Advocate for HIV-positive pregnant women to obtain adequate stock of antiretroviral drugs in order to prevent unnecessary defaulter rates and treatment interruptions.
- Develop a policy on the purchasing, ordering and delivery of the antiretroviral drugs.
- Induct the allocated Health Care Workers on the policies and procedures for ordering the ARVs in order to keep them updated with the relevant ARVs drugs management or control information.

Strategy for Theme 5: Support by health care professionals and family

6.5.5 Strategy 5: Support the health care professionals, families and the HIV-positive pregnant women holistically with regard to the PMTCT services

6.5.5.1 *Rationale*

There should be available transport for conducting home visits by Health Promoters and other PMTCT/MNCWH trained Health Care Workers. This will provide the opportunity for reaching HIV-positive pregnant women. These home visits should encourage more HIV-positive pregnant women to utilise the ANC clinics, to enrol in the PMTCT

programme, and to give birth at the clinics. Accessibility of the PMTCT programme services should be in tandem with the PHC; that is, within a five kilometre radius as stipulated by the 1978 Alma Ata Declaration. Furthermore, the mobile clinics should be stationed at the clusters and not at the health sub-district office in order to reach the mobile points on time.

6.5.5.2 Actions

The following actions are related to Strategy 6 above.

- Advice, discuss and inform the HIV-positive pregnant women about transport plans in accordance with Basic Antenatal Care (BANC), and means of transportation between the communities and the clinics or health care facilities.
- Liaise with the government emergency services, public transport and private community vehicles to prevent practical obstacles such as delays and unreasonable costs for transporting or referring HIV-positive pregnant women when the need arises.
- Provide the Health Care Workers and the HIV-positive pregnant women with information pamphlets of listed emergency telephone numbers (for example, ambulances and hospitals).
- Provide PMTCT programme services through mobile clinic vans in order to target hard-to-reach HIV-positive pregnant women in remote community areas, thereby ensuring improved access to the programme.
- Visit the health care facilities regularly in order to monitor and evaluate the progress of the PMTCT programme services.
- Provide support to Health Care Workers by means of acknowledgement and incentives in order to improve their morale by showing appreciation of their commitment to PMTCT programme work.
- Identify possible efficiency gains and missed opportunities for the performance of the PMTCT programme.
- Design an effective motivation and inspiration strategy for Health Care Workers to enhance the status of the PMTCT programme services.
- Provide practical solutions to various PMTCT programme services challenges.

- Implement updated informative PMTCT programme guidelines and support clinics in the application of new knowledge into practice.
- Continue providing on-going support through training by external knowledgeable facilitators and NGOs of the PMTCT programme for quality improvement.
- Negotiate with the provincial health department to improve salaries, provide benefits such as rural allowances and remuneration for overtime work.
- Provide incentives for completion of short learning courses such as HIV counselling and testing programmes by giving course attendance certificates.
- Ensure Health Care Workers in the clinics and health care facilities rendering services of the PMTCT programme work within their scope of practice as stipulated by their different professional councils and consider NIMART as a form of task shifting.
- Monitor and evaluate effectiveness of PMTCT programme services rendered by the Health Care Workers for the HIV-positive pregnant women by means of coordinator support visits.
- Provide transport to the Health Care Workers, especially the Health Promoters and the WBOTS, to conduct community visits and provide PMTCT programme awareness messages such as the importance of disclosure and adoption of risk-reduction behaviours.
- Advocate for the policy of transport vouchers for all pregnant women, including HIV-positive pregnant women, to avoid stigma and discrimination and maximise their attendance of the PMTCT programme services on their follow-up dates.

Strategy for Theme 6: Fear of disclosure by HIV-positive pregnant women

6.5.6 Strategy 6: Implement and strengthen effective counselling services by skilled competent Health Care Workers

6.5.6.1 *Rationale*

Facilities and structural requirements are necessary for the provision of equipment, supplies, and space for HIV-positive pregnant women. More consultation rooms for counselling and examination of HIV-positive pregnant women should be provided. These will depend on the budget allocated to the health sub-district and its health care

facilities respectively. The health sub-district manager should write a well substantiated motivation requesting the building of extra health care facilities with enough counselling rooms and consultation rooms to the provincial department of health directorate. The size and structure of the health care facilities are the important aspects that affect the availability and accessibility of the PMTCT programme. Consultation with staff is necessary, especially the operational managers regarding the increase of the consulting rooms.

Disclosure of HIV status is seen as a major obstacle, since it has been observed that HIV-positive pregnant women that do not disclose their status to anyone are less likely to adhere to antiretroviral treatment. Some HIV-positive pregnant women change ANC sites after having been identified as HIV-positive at a particular site. Stigmatisation regarding HIV infection is so prevalent that the women may prefer to change to another clinic where their HIV status is unknown. Similarly, women who are known to be HIV-positive and become pregnant for a second time could be reluctant to return to the same ANC clinic. They may fear blame from health workers, especially from the midwives. This should be prevented by advocating for elimination of stigma and discrimination since they lead to loss to follow up of the HIV-positive pregnant women. The coverage of PMTCT programme should include all the clinics or health care facilities initiating ART for lifelong in the health sub-district because some HIV-positive pregnant women were reported to be presenting at the delivering health care facilities or clinics as un-booked cases.

6.5.6.2 Actions

The following actions are deemed relevant to Strategy 6 above.

- Render twenty four hour health counselling services and encourage the closed clinics to open and function, and even extension of clinic hours (until 18h00, for example).
- Train Health Care Workers and supplement the human resource capacity with lay counselors trained in HIV counselling to offer psychological support and mentoring to the PMTCT HIV-positive pregnant women on disclosure, hospital delivery and best infant feeding practices.

- Engage with the media such as the local radio stations to broadcast destigmatization programmes related to PMTCT services.
- Offer couple HIV testing and counselling to support mutual HIV status disclosure. This will provide an opportunity to increase uptake of antenatal HIV testing, increase men's involvement in PMTCT programme, improve HIV disclosure among partners and all of which collectively work to reduce vertical and horizontal HIV transmission.
- Integrate PMTCT programme with other health care services in order to improve linking care and reduce attrition rate.
- Address the HIV-positive pregnant women on how best they can handle or overcome stigmatisation.
- Promote strong health infrastructure by improving the involvement and participation of relevant stakeholders such as faith-based organisations (FBOs) and Love Life.
- Collaborate with NGOs such as the FPD for provision of extra park-homes as the means of temporary consultation rooms whilst the building constructions are in place.
- Establish, increase and strengthen mobile outreach clinics to offer PMTCT programme services to the hard to reach areas that are poorly serviced by static PMTCT sites.
- Adopt and scale up routine confidential provider initiated counselling and testing (PICT) and encourage couple counselling at all health care facilities.
- Offer HIV counselling and testing to all pregnant women of unknown HIV status and re-screening those who were HIV-negative early in their pregnancy.
- Provide HIV counselling and testing at delivery units in order to offer intra-partum ARV prophylaxis for pregnant women found to be HIV-positive and also HIV counselling for post-natal women at 6 weeks and at every 12 weeks as long as the woman is breastfeeding.

Strategy for Theme 7: Child feeding

6.5.7 Strategy 7: Create opportunities for continued child feeding education and counselling

6.5.7.1 *Rationale*

HIV-positive pregnant women should be encouraged to feed their babies in the safest way possible. This would help to prevent post-partum vertical transmission. The practice of exclusive breastfeeding should not be a dilemma, but a safer easy infant feeding option. Mixed feeding should be discouraged at all costs, since it is associated with higher transmission rates than exclusive breast-feeding. Guidelines should also be developed and HIV-positive pregnant women should be advised and counselled about HIV and feeding choices in order to enable them to make informed decisions. Improved HIV-free child survival should be achieved by optimising initiation of HAART during pregnancy, delivery and breastfeeding.

6.5.7.2 *Actions*

The following actions are linked to Strategy 7 above, and are intended to actualise the child feeding challenges.

- Facilitate and maintain efficacy and safety of infant feeding interventions to prevent MTCT.
- Provide health education on the importance and benefits of exclusive breastfeeding during the first six months of the child's life.
- Emphasise the importance of prevention of morbidity and mortality from diseases other than HIV during exclusive feeding by educating HIV-positive pregnant women and the community on non-communicable diseases (NCDs) as the means of promoting healthy life styles.
- Involve partners and close relatives on infant feeding information in order to promote social and emotional support, as well as adherence to the exclusive breastfeeding for six months.

- Launch educational programmes through ‘mom connect’ and WBOTS in all the clinics and communities on exclusive breastfeeding for six months in order to improve adherence and appropriate choice as recommended by the WHO.
- Improve post-natal follow-up to better support HIV-positive pregnant women to adhere to safe infant feeding options in order to minimise post-natal vertical HIV transmission.
- Provide optimal advice to HIV-positive pregnant women on the importance of exclusive breastfeeding for six months and continuation at the time of introduction of other foods and fluids.
- Disseminate and implement the most recent feeding guidelines in clinical practice and do site visits to ensure if they are practiced.
- Recommend avoidance of exclusive breastfeeding when replacement feeding is acceptable, feasible, affordable, sustainable and safe (AFASS), otherwise exclusive breastfeeding is recommended during the first six months of life.
- Inform HIV-positive pregnant women about different child feeding options.
- Support HIV-positive pregnant women irrespective of the feeding options they choose.
- Provide child feeding counselling as part of the PMTCT programme.
- Strengthen child feeding counselling services to assist HIV-positive pregnant women in making informed and appropriate decisions regarding child feeding.

Strategy for Theme 8: Formal in-service trainings and workshops on the PMTCT programme

6.5.8 Strategy 8: Promote and provide effective trainings and workshops for Health Care Workers, HIV-positive pregnant women, partners, families and communities

6.5.8.1 *Rationale*

Training and updated PMTCT programme information are essential tools in the fight against MTCT. It should be noted that HIV management is dynamic, and Health Care Workers need to keep abreast of the latest developments in HIV management. Knowledge of HIV and AIDS is crucial at this point, and training needs to be geared

towards that. More training and support for quality PMTCT programme is of paramount importance for the Health Care Workers' performance and HIV-positive pregnant women's benefit. They should be trained in support and cognitive behaviour interventions such as individual therapy and group therapies so that they could conduct sessions with the HIV-positive pregnant women. The curriculum should include supportive health care, coping with stigma, avoiding negative emotions, safe infant feeding practices, partner disclosure, safe sex practices, family planning, and pre-and-post-delivery care of their infants.

The training should develop and equip the Health Care Workers with the skills and confidence required to resolve any PMTCT programme problems and challenges. The health sub-district management should continue offering and conducting workshops for managers and Health Care Workers in clinical mentoring and supportive supervision with regard to implementing an effective PMTCT programme. Rapid continuous training of nurses in NIMART should always be undertaken. Clinical mentoring and supportive supervision should also remain a very strong part of the health sub-district system. Managers, facilitators and medical officers should be anchors of support to the NIMART trained nurses working in the clinics or health care facilities.

Interpretation and compliance with PMTCT programme policies, guidelines and protocols should be practiced and adhered to by the sub-district management. They should lead by example in managing the services of the PMTCT programme for the benefit of other Health Care Workers, as leadership comes with enormous responsibilities. The effective PMTCT programme services should motivate them in order that they become assets to the health sub-district and the HIV-positive pregnant women.

Supportive supervision audit feedback should be effective in improving PMTCT programme availability and accessibility in the health care facilities. The managers and the Health Care Workers should own the PMTCT programme, and have clear roles and responsibilities and knowledge of the policies, protocols and guidelines. The level of support at the health care facilities should increase performance by Health Care Workers offering the PMTCT programme services. The better use of monitoring and evaluation indicators to improve the quality and universal coverage of PMTCT programme and to advocate for more support should be emphasised. Adherence to

quality assurance policies and national core standards with regard to quality of PMTCT programme services, including the Batho Pele Principles (People First), Patients' Rights Charter, waiting times, stocks and equipment should be maintained.

6.5.8.2 Actions

The following actions relate to Strategy 8 above.

- Train, develop and equip managers in order that they become better leaders in managing PMTCT programme services.
- Supervise PMTCT programmes of Health Care Workers with refresher trainings and workshops to keep them abreast of the latest PMTCT information and knowledge.
- Provision of mentorship supervision to the facilities, ensuring regular staff appraisal for work well done and use of patient satisfaction to encourage staff during visits.
- Promote Health Care Workers' mastery skills in rendering quality PMTCT programme services by offering them the opportunities to develop colleagues in other health sub-district clusters.
- Allow Health Care Workers to raise concerns and challenges with regards to PMTCT programme availability and accessibility during their monthly meetings.
- Enhance and improve Health Care Workers' performance through professional development and supporting them in their compliance with the PMTCT programme services.
- Enhance psychological support and empowerment of the Health Care Workers through debriefing courses linked to rendering PMTCT programme services.
- Communicate with colleagues about the PMTCT programme by means of memos and diaries, followed by oral presentations and demonstrations.
- Present workshops and trainings on PMTCT programme to both the Health Care Workers and HIV-positive pregnant women as an on-going educational process to increase their knowledge and enable them to deal more effectively with PMTCT programme-related matters.
- Adapt PMTCT education programmes continuously as new knowledge is constantly obtained in the fast-changing area of HIV/AIDS care.

- Actively attend and participate in PMTCT programme workshops as an expression of the need to obtain more PMTCT programme-related information and knowledge and continuing professional development (CPD) as will be required by the SANC from 2015.
- Give feedback to colleagues after attending PMTCT programme sessions, as formal feedback presentations are an effective way of dissemination of information in a relatively short period of time.
- Provide Health Care Workers with opportunities to attend PMTCT programme education courses such as NIMART on a regular basis.
- Design an education based Health Care Worker programme with specific goals and outcomes that may result in greater competency on training and better outcomes for PMTCT services.
- Adapt the training of lay counselors, M2M mentors and health care volunteers to meet the extended roles that they play in PMTCT.
- Standardize and strengthen the training programmes and incorporate the system of mentorship in the sub-district to ensure that the lay counsellors are adequately prepared for their roles in PMTCT.
- Use innovative teaching and learning approaches to promote competent Health Care Workers for rendering of the PMTCT services.
- Re-orientate and re-train Health Care Workers on a continuous basis about PMTCT programme in order to improve mothers and infants survival.
- Train the Health Care Workers especially the lay counselors and health promoters on how to conduct the CHCT during home visits and also on how to maintain confidentiality.
- Provide Health Care Workers with updated information related to infant feeding on a regular base.
- Empower managers with up-to-date relevant PMTCT programme information for them to be competent and manage effectively.
- Collaborate with multidisciplinary team members to emphasise the importance of every Health Care Worker's contribution and cooperation in rendering services of the PMTCT programme.
- Encourage monthly maternal mortality, perinatal and PMTCT steering committee meetings in the health sub-district clusters in order that Health Care Workers could share knowledge and exchange ideas with regards to strengths,

weaknesses, opportunities and threats of rendering PMTCT programme services.

- Encourage operational research to investigate the barriers to PMTCT programme services utilisation with the aim of improving its availability and accessibility.

Strategy for Theme 9: Loss to follow-up activities

6.5.9 Strategy 9: Develop and implement strategies to prevent loss to follow-up activities

6.5.9.1 *Rationale*

The shortage of staff, shortages and interrupted supplies of materials and shortage of space for consultations including counselling should be dealt with since they were some of the reasons leading to loss of HIV-positive pregnant women in PMTCT programme. The constraints led to long waiting periods for pre-and-post test counselling and some HIV-positive pregnant women left without getting treatment. The constraints also compromised privacy and confidentiality as a result of utilising the park homes and parking areas for support groups. In addition, delays in getting ANC services were encountered.

Improved prenatal follow-up could better support HIV-positive pregnant women in adhering to the prescribed ARVs and minimise vertical HIV transmission to unborn babies despite PMTCT interventions. Health education should be offered to HIV-positive pregnant women to increase knowledge about HIV and PMTCT associated with referral for testing, promotion of early diagnosis and initiation of HAART before onset of symptomatic disease. Improved HIV free maternal and infant survival may be achieved by optimizing initiation of HAART during pregnancy, delivery and breastfeeding.

6.5.9.2 *Actions*

The following are the primary actions associated with Strategy 9 above.

- Trace predictors of loss to follow-up among HIV-positive pregnant women enroled in PMTCT programme.

- Involve the communities to facilitate tracking of HIV-positive pregnant women, treatment uptake and individual support.
- Involve partner and family in PMTCT services to improve the coverage.
- Increase the number of mobile clinics in the Health sub-district to render PMTCT services in the informal settlements and the neighbouring border gates.
- Encourage lay counsellors to do home visits and assess if HIV-positive pregnant women are free to take the ARVs.
- Explore all the circumstances including home circumstances and disclosure of the HIV-positive pregnant women status.
- Improve ART adherence to HIV-positive pregnant women through discouragement of loss to follow-up activities such as defaulting treatment and returning to the clinics during delivery times.
- Review current policy of PMTCT programme support and suggest a model for mother-infant follow-up.
- Strengthen integration of PMTCT services within the ANC to be universally available and accessible in order to prevent discrimination, stigma and loss to follow-up.
- Address the cultural and social constraints to reduce loss to follow-up and increase adherence to the PMTCT programme.

6.6 DESCRIPTION OF THE EVALUATED STRATEGIES

Table 6.1 below depicts the scores and evaluation criteria of developing PMTCT programme strategies.

Table 6.1 PMTCT programme scores and evaluation criteria

Scores	Evaluation criteria
4	Complete, clear, well formulated and highly applicable
3	Applicable, but needs reformulation
2	Unclear, applicability questionable
1	Irrelevant, totally not applicable

The five experts in the field of PMTCT evaluated the above strategies and provided feedback. As indicated in Table 6.2 below, two evaluators were from an academic background, and three from government. The 4-point Likert Scale was utilised according to the following calibrations: 1=irrelevant, totally not applicable; 2=unclear,

applicable questionable; 3=applicable but needs reformulation; and 4=complete, clear, well-formulated. The Likert Scale determines the opinion or attitude of a subject and contains a number of declarative statements with a scale after each statement. The Likert Scale is the most commonly used of the scaling techniques in nursing and health care studies (Grove et al 2013:430). Scores that registered 4's were accepted, the 3's and 2's were re-formulated, and the 1's were deleted. Most of the evaluators scored 4, and few strategies registering 2's and 3's were re-formulated, where there was a repetition of strategies the repeated one was deleted. The reformulated strategies were reflected in this chapter as the final ones accruing from the study as a whole.

Table 6.2 outlines the description of the expert evaluators' biographic information.

Table 6.2 Expert PMTCT programme evaluators' information

No	Qualification	Occupation	Professional experience	Evaluation method
1	PhD	Lecturer	Lectures under and postgraduate university Midwifery students	Electronically, PDF
2	BA in Health Sciences, postgraduate diploma in public health, National diploma in safety management and Diploma in nursing sciences and midwifery	Deputy Manager for provincial regional training centre	Coordinating PMTCT, HAST, MNCWH, EPI and CHW trainings	Electronically, PDF
3	Currently in progress: Msc M Ed in community pediatrics Degree in nursing (I et A) and Diploma in nursing (General, Psychiatry, Community) and Midwifery	Assistant Director: MNCWH at a Health District	Management of MNCWH programmes	Electronically, PDF
4	BA in Health Science and Social Services, Diploma in General Nursing and Midwifery, Diploma in Community Nursing and Diploma in Advanced Midwifery and Neo-natal Nursing Science	Deputy Director: PMTCT National Department of Health	Management of PMTCT programme nationally	Hand written in the presence of the researcher
5	Honours Bachelor of Art in Health Studies in Midwifery and Neo-natal Nursing Science, Bachelor's degree in education and management, Diploma in Nursing Science, Midwifery, General , Psychiatry and Community Nursing	Lecturer	Lecturers: Midwifery at a Nursing College	Electronically, Word

6.7 REVIEW OF THE STRATEGIES

The purpose of reviewing the strategies was to ensure that the strategies were of acceptable and achievable quality. The proposed strategies as discussed in section 6.4 were sent to a group of experts in Midwifery and PMTCT programme for external review. The review group was purposely selected to involve expert professionals in the government and academic fields. The respondents were senior health government management officials in the PMTCT/MNCWH and two academics who are teaching Midwifery. This was done in order to assess whether the strategies could be acceptable as described, acceptable but with recommendation, or not acceptable at all.

The strategies were made available online to these experts for external review. The supervisors of this study who are experts in research and Midwifery were also presented with the proposed strategies. The process of strategies evaluation and review assisted to improve officially acceptance in order to develop the final strategies for facilitation of the availability and accessibility of the PMTCT programme. The abstract of the study was also sent to the evaluators which included the topic, problem statement, objectives of the study, significance and methodology applied. Table 6.2 outlines the description of the expert evaluators' biographic information.

Tables 6.3 Description of the separate scores from the individual evaluators

Evaluator 1:

Strategy/Criteria	1	2	3	4	5	6	7	8	9
Completeness	3	3	3	3	4	4	4	4	4
Applicability	4	4	3	4	4	4	4	3	4
Clarity	3	3	3	4	4	4	4	4	3
Relevance	3	3	3	3	4	4	3	4	3
Total Score/16	13	13	12	14	16	16	15	15	14

Evaluator 2:

Strategy/Criteria	1	2	3	4	5	6	7	8	9
Completeness	4	4	4	4	4	4	4	4	4
Applicability	4	4	4	4	4	2	4	4	4
Clarity	3	4	4	4	4	3	4	4	4
Relevance	4	4	4	4	4	3	4	4	4
Total Score/16	15	16	16	16	16	12	16	16	16

Evaluator 3:

Strategy/Criteria	1	2	3	4	5	6	7	8	9
Completeness	4	4	2	4	4	2	4	4	2
Applicability	3	4	4	4	2	2	4	4	2
Clarity	3	4	4	4	2	2	4	4	4
Relevance	4	4	4	4	4	2	2	4	4
Total Score/16	14	16	14	16	12	8	14	16	12

Evaluator 4:

Strategy/Criteria	1	2	3	4	5	6	7	8	9
Completeness	4	4	4	4	4	4	3	4	3
Applicability	2	3	4	3	4	4	3	4	4
Clarity	3	3	3	3	4	4	4	4	4
Relevance	4	3	4	3	4	4	3	4	4
Total Score/16	13	13	15	13	16	16	13	16	15

Evaluator 5:

Strategy/Criteria	1	2	3	4	5	6	7	8	9
Completeness	3	3	3	4	4	3	3	3	4
Applicability	4	3	2	4	4	4	3	3	4
Clarity	4	3	3	4	4	3	3	3	3
Relevance	3	3	2	4	4	3	3	4	3
Total Score/16	14	12	10	16	16	13	12	13	14

Table 6.4 shows the scores from the evaluation group as well as the mean score for each strategy.

Table 6.4 Description of the scores from the evaluation group

Strategy/Evaluator	Evaluator 1	Evaluator 2	Evaluator 3	Evaluator 4	Evaluator 5	Mean Score
Total Score	1	2	3	4	5	
Strategy 1	13	15	14	13	14	13.8
Strategy 2	13	16	16	13	12	14
Strategy 3	12	16	14	15	10	13.4
Strategy 4	14	16	16	13	16	15
Strategy 5	16	16	12	16	16	15.2
Strategy 6	16	12	8	16	13	13
Strategy 7	15	16	14	13	12	14
Strategy 8	15	16	16	16	13	15.2
Strategy 9	14	16	12	15	14	14.2

The nine strategies based on the nine themes and on the conceptual framework were evaluated, accepted and finally supported with the rationale and actions.

6.8 CONCLUSION

This chapter introduced and presented the strategies to facilitate the availability and accessibility of the PMTCT programme in a health sub-district, which means that Phase 3 of this study has been implemented. The developed strategies have been evaluated and reviewed by experts in the field of PMTCT programme delivery and implementation. The presented strategies were based on the developed conceptual framework encapsulated in Phase 2 of this study. The chapter also highlighted the achievement as indicated in the purpose and objectives of the study. The strategies developed are meant to serve as guidelines for the health sub-district management to improve the services of the PMTCT programme and the Health Care Workers' capacity to render the PMTCT programme services to HIV-positive pregnant women effectively and efficiently. In Chapter 7, the conclusions and recommendations are discussed.

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

In Chapter 6, strategies for facilitation of the availability and accessibility of the PMTCT programme for HIV-positive pregnant women were described. These strategies were evaluated by experts, after which recommendations were made. Chapter 7 is aimed at addressing a brief overview of the study, presentation of the limitations, and recommendations for nursing practice, education and research.

7.2 OVERVIEW OF THE STUDY

The objectives of this study were to explore and describe the experiences of HIV-positive pregnant women and Health Care Workers with regard to the extent to which the PMTCT programme is available and accessible in the Madibeng Health sub-district of the North West Province. The aim was therefore to develop strategies to facilitate the availability and accessibility of the PMTCT programme in Bojanala Health District of the North West Province for the HIV-positive pregnant women.

A qualitative, exploratory, descriptive and contextual research design was used to gain better understanding of the experiences of HIV-positive pregnant women and Health Care Workers with regard to the availability and accessibility of the PMTCT programme in Madibeng Health sub-district of the North West Province. The study consisted of Phases 1, 2 and 3, all of which convergently relate to the objectives of the study. The population consisted of HIV-positive pregnant women between 18 and 49 years of age, as well as Health Care Workers between 21 and 60 years of age. The non-probability purposive sampling technique was used to identify potential participants. Data was collected from both the HIV-positive pregnant women and the Health Care Workers by means of a digital voice recorder. Ten in-depth individual, semi-structured interviews were held with HIV-positive pregnant women, while the three FGDs were held only with

the Health Care Workers. Data analysis, organisation and interpretation were done by using eight steps of Tesch's descriptive methods (Creswell 2009:180).

The findings of the study revealed similarities and dissimilarities between the experiences of HIV-positive pregnant women and those of the Health Care Workers. Themes from HIV-positive pregnant women included: acceptance of one's sero positive status; maternal concerns, stressors about HIV status; lack and shortage of resources, and support by Health Care Professionals and family. Data emanating from the Health Care Workers established the following themes: fear of disclosure by HIV-positive pregnant women; child feeding dynamics; formal trainings and workshops on PMTCT programme; lack and shortage of resources and loss of follow-up.

Conceptualisation of the main concepts based on the results of Phase 1 was presented in Chapter 5. Proposed strategies were developed based on the identified aspects addressed in the conceptual framework in Chapter 5, as well as from the comments made in relation to QHOM constructs and the Survey List activities proposed by Dickoff et al (1968:415). The Survey List was utilised to identify the following:

- “agent” as the Health Care Worker
- “recipient” as HIV-positive pregnant women
- “framework” as health sub-district rendering PMTCT programme services
- “procedure” as the mechanism of the development of strategies to facilitate the availability and accessibility of the PMTCT programme to the HIV-positive pregnant women
- “dynamics” as the lack of effective, sustainable, available and accessible PMTCT programme
- “outcome” as the desired improvement in the quality of life of HIV-positive pregnant women

Following the conceptualisation of the strategies, the strategies were then developed to facilitate the availability and accessibility of the PMTCT programme for HIV-positive pregnant women. The strategies were critically evaluated by the PMTCT programme experts. Based on their critical evaluation, actions and opinions were then documented as suggested by the experts. Following the evaluation and review of the proposed

strategies, final strategies were developed based on the comments and recommendations from the PMTCT programme experts.

7.3 GENERAL CONCLUSIONS

The conclusions were discussed under the different themes and are derived from the responses of the participants. The overall conclusion from this study is that the HIV-positive pregnant women and the Health Care Workers encountered a number of experiences with regards to the availability and accessibility of the PMTCT programme in the Madibeng Health sub-district of the North West Province.

Certainly, when there is lack and shortage of resources, it is difficult for the Health Care Workers to render the PMTCT programme services to the HIV-positive pregnant women effectively. Therefore, strategies are required to effectively and efficiently facilitate and improve the availability and accessibility of the PMTCT programme. In addition to the developed strategies, there are several aspects that are recommended to improve practice, education, and for further research.

7.4 RECOMMENDATIONS

The following recommendations were made in affinity with the findings of this study.

7.4.1 Recommendations for nursing practice

The recommendations for nursing practice are as follows:

- Educational, structured support groups for HIV-positive pregnant women and the involvement of male partners with regard to PMTCT programmes, should be implemented and developed to assist in facilitation of the acceptance in both parties.
- Couple testing should be practiced and strengthened to avoid noticing of the HIV-positive status by pregnant women during the first ANC booking.
- More campaigns on the PMTCT programme should be arranged and organised to raise community awareness in different communities in order to promote early

adherence to the ARVs, male involvement and prevent loss to follow-up, stigmatisation and discrimination.

- Health Care Workers and HIV-positive pregnant women should be well equipped with PMTCT programme knowledge during health education sessions, workshops and in-service trainings so that they are conversant and empowered.
- Vacancy posts, especially for dieticians, doctors, pharmacists and social workers should be advertised and filled-in, in order to reduce the PMTCT programme workload and promote task shifting in the ideal clinics.
- Increasing the number of mobile clinics to promote the availability and accessibility of the PMTCT programme services to remote rural, mining and farming areas of the health sub-district.
- Transport should be provided for Health Promoters, WBOTS and DOTS for conducting awareness campaigns and health education programmes based on PMTCT programme services.
- Health Care Workers should make use of PMTCT programme educational materials, quality assurance guidelines and protocols to explain and compile matters such as the monthly statistics.
- Integration of PMTCT/MNCWH services, including ANC, labour and delivery, PNC, family planning, sexual reproductive health and EPI should be practiced by all the health care facilities to promote a one stop-service and prevent isolation of HIV-positive pregnant women.
- Health sub-district management should conduct site visits regularly to the health care facilities in order to promote the supervision, monitoring and evaluation of the PMTCT programme services and give feedback with regard to patient satisfaction.
- HIV-positive pregnant women should be encouraged to join and participate in the projects of ‘mom-connect’ treatment clubs and support groups to share ideas with regard to their experiences of PMTCT programme.
- Health Care Workers should also use the clinic cell phones to remind HIV-positive pregnant women of their return ANC dates.
- Extension of working hours to weekends and nights should be practiced, in order to enable the HIV-positive pregnant women to attend during these times, especially those who are employed.

- Support and mentoring of the Health Care Workers working with PMTCT programme patients should be provided on a continuous basis, in order to improve their morale and prevent the burn-out syndrome.
- Rural allowance should be provided to encourage more Health Care Workers to work in the remote rural areas of the sub-district. This should be negotiated between the health sub-district management, NDoH and the government ruling political party.
- Support should be encouraged and negotiated with relevant stakeholders such the NGOs, FBOs, FPD and the NPOs with regard to PMTCT programme.
- There should be a MOU and mutual agreement concerning the rendering of the PMTCT programme services between different government departments (such as Health, Education, Social Development, and Public Works) in order to facilitate the desired improvements relevant to the availability and accessibility to PMTCT programme.

7.4.2 Recommendations for education

The research recommends the following, in respect of education:

- There should be inclusion of the PMTCT programme in the curriculum from high school to tertiary institution level.
- All the Health Care Workers of the sub-district should be trained in PMTCT/MNCWH by knowledgeable programme coordinators, facilitators and managers.
- Relevant short courses should be developed and be accredited as soon as CPD system for Health Care Workers, especially nurses and midwives, are implemented in 2015.
- There should be training of many mentor mothers and lay counsellors to address complex issues faced by HIV-positive pregnant women such as reproductive health, family planning, domestic and sexual violence, nutritional counselling and grief counselling.

7.4.3 Recommendations for research

Based on this study, further research is recommended on the following:

- A study to investigate the extent of knowledge by health sub-district management, including the coordinators and facilitators, on managing the services of the PMTCT programme and MNCWH.
- A study to explore the integration of reproductive health services, including sexual reproductive health, HIV and AIDS.
- There is a need to duplicate this study in other sub-districts of the North West Province prior to generalisation of the research findings.
- Explore the extent of involvement and participation of male partners in PMTCT/MNCWH programmes, regardless of their marital and HIV status.
- Research to explore factors that contribute to women falling pregnant with no knowledge of their HIV status.
- Research is needed for the development of strategies to involve couples in pre-testing/couple testing for HIV prior to conceiving children.
- A survey could be carried out to determine the types of support systems for HIV-positive pregnant women available in the health sub-district.

7.4.4 Recommendations for policy making

The recommendations for policy making are as follows:

- The NDoH should establish and strengthen the PMTCT programme policies to protect the rights of HIV-positive pregnant women with regard to disclosure, discrimination and stigma.
- Changes in policy should be disseminated to different provinces simultaneously to prevent confusion among the Health Care Workers rendering the services of the PMTCT programme.
- There should be development and updating of policies of the PMTCT programme with regard to task shifting and NIMART.
- Involvement of different relevant Health Care Workers to assist in the development of policies, guidelines and standard operating procedures (SPOs).

7.5 CONTRIBUTIONS OF THE STUDY

The experiences of the HIV-positive pregnant women and the Health Care Workers were explored, described, and contextualised. The major themes emerging from this study provided a base for conceptualisation of the findings. The conceptual framework also provided the base for development of the strategies. It is hoped that the strategies will facilitate and improve the availability and accessibility of the PMTCT programme. The findings will be used to make the health sub-district management aware of the experiences of the HIV-positive pregnant women and of the Health Care Workers with regards to the PMTCT programme's availability and accessibility. Therefore, the findings of this study may assist the North West Provincial Health Department to strengthen the body of knowledge for Health Care Workers in this important area of Midwifery (PMTCT programme). Also, data collected from this research study could be valuable for planning unique PMTCT programme services for the HIV-positive pregnant women.

The strategies developed will also facilitate and improve the PMTCT programme services of other health sub-districts with the same experiences. Presentation of the strategies will be conducted for the participating clusters in the form of feedback. All the Health Care Workers who participated in the FGDs will be invited to attend feedback sessions that will be organised by the researcher and the health sub-district management. The feedback sessions for the participants will be organised at the clusters' health care facilities. The strategies will then be presented to health sub-district managers and later to the different Health Care Workers of the clusters in the form of interactive sessions. The final results will be disseminated in the form of a presentation at the Midwifery, HIV and AIDS congress or conference in South Africa and abroad. The results will be published in an accredited Midwifery, HIV and AIDS journal.

7.6 LIMITATIONS OF THE STUDY

The limitations of a study refer to the restrictions or problems in a study that may decrease the generalisability of the findings (Grove et al 2013:598). The participants in this study had a wealth of experiences with regards to the availability and accessibility of the PMTCT programme, were able to provide rich data and were noted to have been

ready to give out the information. However, the researcher acknowledges the following limitations:

- The findings could have been different if the participants were from smaller clinics or health facilities rather than the three health sub-districts' clusters.
- Due to the shortage of doctors and social workers, the sampling criteria were slightly narrowed, thus making it difficult to find different categories of Health Care Workers to participate in the FGDs.
- The interviews and FGDs times were allocated differently due to the clusters' routines.
- This study was conducted in only one selected health sub-district of a health district in the North West Province.
- The study used numeric data during calculation of evaluated experts' scores of the strategies.

7.6.1 Challenges encountered

During the fieldwork stage (empirical phase) of data collection at the three health care clusters of Madibeng sub-district, the following challenges were experienced by the researcher. However, these challenges did not in any way compromise the integrity of the study:

- **Earning trust of the participants**

Initially, some of the participants were not at ease during the individual interviews, until the researcher accentuated the rapport effort. During the focus group discussions, however, participants were more at ease.

- **Clarity of the questions**

During both the individual interviews and the group discussion sessions, some of the participants did not understand the questions. The researcher had to paraphrase the questions and clarify some aspects repeatedly. The questions were essentially meant to elicit and validate the participants' responses.

- **Duration of the interviews**

It was difficult to limit the interviews and discussions times to the same amount of time as some (interviews and discussions) were discontinued when saturation of data was reached, whilst others were continued for as long as the participants were still willing to be involved.

- **Contradicting views**

Focus group members sometimes argued amongst themselves, which delayed the consensus-reaching process, which was enabled by the researcher allowing participants time to debate and deliberate freely amongst themselves.

- **Disturbances**

In one cluster, the constant ringing of the Operational Nurse Manager's phone interrupted the flow of proceedings. At another cluster, the Operational Nurse Manager had to leave to attend to matters in the facility and returned later. During one individual interview session, a professional nurse entered the interview room from the back, but apologised that she had not seen the notice on the door. The notice clearly indicated that a meeting was in progress. That individual interview had to be started again.

Finally, the findings of this study are only applicable to the three clusters of the health sub-district that took part in this study. Therefore, the study could not be generalised since it was contextual in nature. Furthermore, inclusion of doctors and social workers would have maximised the value of this study. However, it was not easy to find them in the clusters since they were mostly hospital-based and worked in the clusters on very rare occasions.

7.7 CONCLUDING REMARKS

This study assisted the researcher in understanding the experiences of HIV-positive pregnant women and Health Care Workers with regard to the availability and accessibility of the PMTCT programme.

It is envisaged that the developed final strategies will address most of the experiences encountered by the HIV-positive pregnant women and the Health Care Workers. The satisfactory availability and accessibility of an effective PMTCT programme should be premised on the inclusion of education and mobilisation of the HIV-positive pregnant women on early ANC booking, BANC, HCT, adherence to ARVs, PNC, exclusive breastfeeding and FP. Further research needs to be conducted into the effectiveness and efficiency of the proposed strategies as interventions for addressing and examining the factors that influence PMTCT programme's availability and accessibility in the health sub-district.

This study could also support implementation of the developed strategies in the health sub-district. Provision of oversight, monitoring and evaluation of all maternal health and the PMTCT programme, including social mobilisation activities and training, should be improved. PMTCT programme progress, supervision and NIMART scale-up should improve maternal and neo-natal health outcomes with the reduction of maternal and neo-natal deaths. Additionally, exemplary leadership at all levels of care in the health sub-district is of value and should improve the PMTCT programme's availability and accessibility.

7.8 PERSONAL REFLECTION

Undertaking this study has been a truly challenging, but fruitful experience. Notwithstanding that there were various challenges during the study; it has been an inspiring journey, especially during the data collection and evaluation of the strategies. I am grateful that I was able to interact with the participants and the experts in the field of this study. I believe the strategies are by their own right a meaningful contribution to new knowledge in the availability and accessibility of the PMTCT programme. I also believe that the strategies developed are effective and feasible for facilitation and improvement of availability and accessibility of the PMTCT programme. The elimination of mother-to-child HIV transmission and improvement of the health of women, their partners and families is of utmost importance; and requires dedication in the provision of PMTCT programme services and support to HIV-positive pregnant women by the Health Care Workers.

REFERENCE LIST

Ahmadu-Ali, U.A & Couper, I.D. 2013. The practice of exclusive breastfeeding among mothers attending a postnatal clinic in Tswaing sub-district, North West Province. Johannesburg: Elsevier.

Albrecht, S; Semrau, K; Kasonde, P; Sinkala, M; Kanakasa, C; Vwalika, C; Aldrovandi, G.M; Thea, D.M & Kuhn, L. 2006. Predictors of non-adherence to single-dose nevirapine therapy for the prevention of mother-to-child HIV transmission. *Journal of Acquired Immune Deficiency Syndrome*, 41(1):114-118.

From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1855628/>. (Accessed 21/05/2014).

American Association of Colleges of Nursing (AACN). 2007. White paper on education and role of the clinical nurse. February 2007. USA: AACN.

Angotti, N; Dione, K.Y. & Gaydosh, L. 2010. An offer you couldn't refuse? Provider-initiated HIV testing in antenatal clinics in rural Malawi. *Oxford Journal of Medicine, Health Policy and Planning*. 26(4):307-315. London: Oxford University Press.

Asefa, A & Mitike, G. 2014. Prevention of mother-to-child transmission (PMTCT) of HIV services in Adama town, Ethiopia: Clients' satisfaction and challenges experienced by service providers. *Bio Medical Central (BMC) Pregnancy and Childbirth*, 14(1), Article number 57.

Awiti-Ujiji, O; Ekstrom, A.M; Ilako, F; Indalo, D; Wamalwa, D & Rubenson, B. 2011. Reasoning and deciding PMTCT-adherence during pregnancy among women living with HIV in Kenya. *Culture, Health & Sexuality: An International Journal for Research, Intervention and Care*, 13(7):829-840.

From: <http://dx.doi.org/10.1080/13691058.2011.583682>. (Accessed 17/05/2014).

Babbie, E. 2007. The practice of social research. 9th edition. California: Wadsworth.

Babbie, E. 2008. The basics of social research. 4th edition. USA: Wadsworth.

Babbie, E.R & Mouton, J. 2001. The practice of social research. Cape Town. Oxford University Press.

Babbie, E.R & Mouton, J. 2009: The practice of social research. 12th edition. Cape Town: Oxford University Press.

Babbie, E. 2010. The practice of social research. 12th edition. California, USA: Wadsworth CENGAGE Learning.

Badernhost, C. 2010. Dissertation writing. A research journey. Pretoria: Van Schaik Publishers.

Barigye, H; Levin, J; Maher, D; Tindiwigi, G; Atuhumuza, E; Nakibinge, S. 2010. Operational evaluation of a service for prevention of mother-to-child transmission of HIV in rural Uganda: barriers to uptake of single dose nevirapine and the role of birth reporting. *Tropical Medical International Health*. 15(10):1163-1171.

Barron, P; Pillay, Y; Doherty, T; Sherman, G; Jackson, D; Bhardwaj, S; Robinson, P & Goga, A. 2012. Bulletin of the World Health Organization. Eliminating mother-to-child HIV transmission in South Africa. From: <http://www.who.int/bulletin/volumes/91/1/12-106807en/>. (Accessed 08/08/2014).

Bedimo, A.L; Bessinger, R & Kissinger, P. 1998. Reproductive choices among HIV-positive women [abstract]. Paper presented at the National Conference of Women Innovation Care Policy. Los Angeles, California.

Bedimo-Rung, A.L; Clark, A.R; Dumestre, J; Rice, J & Kissinger, P. 2005. Reproductive decision-making among HIV-Infected women. *Journal of the National Medical Association*, 97(10):1403-1410.

From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2594717/>. (Accessed 24/07/2013).

Betancourt, T.S; Abrams, E.J, McBain, R & Smith Fawzi, M.C. 2010. Family-centred approaches to the prevention of mother-to-child transmission of HIV. *Journal International AIDS Society*, 13 (Suppl 2):S2.

From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2890971/>. (Accessed 20/05/2014).

Bhardwaj, S. 2012. Presentation on behalf of the PMTCT TWG and SC Members at MCH Indaba, 16th July 2012.

Bhardwaj, S; Barron, P; Pillay, Y; Treger-Slavin, L; Robinson, P; Goga, A & Sherman, G. 2014: Elimination of mother-to-child transmission of HIV in South Africa: Rapid scale-up using quality improvement. *South African Medical Journal*, 104(3):Supplement 1.

Bobb, D. 2012. Women out loud: How women living with HIV will help the world end AIDS. From: <http://www.unmultimedia.org/radio/english2012/12/women-out-loud-how-women-living>. (Accessed 20/08/2013).

Bouma, G.D & Ling, R. 2010. The research process. 5th edition. Australia: Oxford University Press.

Botma, Y; Greef, M; Mulaudzi, F.M & Wright, S.C.D. 2010. Research in health studies. Cape Town: Pearson Education South Africa.

Brink, H. 2006. Fundamentals of research methodology for health care professionals. 2nd edition. Cape Town: Juta & Company Ltd.

Brink, H; Van der Walt C; & Van Rensburg G. 2010. Fundamentals of research methodology for health care professionals. 2nd edition. Cape Town: Juta.

Bulterys, M. Role of traditional birth attendants in preventing perinatal transmission of HIV. *British Medical Journal*, 324(7331).

From: <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&listuids=11809647>. (Accessed 28/05/2012).

Burke, M. 2004. Maximising male participation in PMTCT programs in Tanzania. International AIDS Conference, 11-16 July 2004. Abstract no. ThPe8144.2004. From: <http://www.iasociety.org/Default.aspx?pageld=11&abstratctId=2175807>. (Accessed 20/12/2012).

Capazorio, B. 2006. Critical staff shortage at Mandela Bay hospitals. *The Herald*. 14 September:10.

Centre for integrated health programme (CIHP). 2014.

From: <http://www.cihpng.org/reproductive-health-rh-services/>. (Accessed 12/09/2014).

Chandisarewa, W; Stranix-Chibanda, L; Chirapa, E; Miller, A; Simoyi, M; Mahomva, A; Maldonado, Y & Shetty, A.K 2007. Routine offer of antenatal HIV testing ("Opt-out" approach) to prevent mother-to-child transmission of HIV in urban Zimbabwe. *Bull World Health Organ*, 85:843-850.

Chaparanganda, I. 2012. Effectiveness of PMTCT programme at Mogwase Health Centre, South Africa. *Retrovirology*, 9:14.

Chiegil, R.J. 2012. Quality of antiretroviral therapy in public health facilities in Nigeria and the perceptions of the end users. Doctoral Thesis. Pretoria: Unisa

Chikonde, J.R; Sandby, J & Martinson F. 2009. The prevention of mother-to-child HIV transmission programme in Lilongwe, Malawi: Why do so many women drop out? *Reproductive Health Matters*, 17(33):143-151. From: www.rhmjournal.org.uk. (Accessed 19/06/2013).

Chopra, M; Daviaud, E; Pattinson, R; Fonn, S & Lawn, J.E. 2009: Saving the lives of South Africa's mothers, babies and children: Could the health system deliver? *The Lancet*, 374:835-846.

Chweneagae, D; Delis-Jarrosay, N; Farina, Z; Fawcus, S; Gondi, N; Khaole, N; Kunene, B; Mhlanga, R.E; Mbambisa, G.Z; Mbombo, N; Molefe, N.E; Moodley, J; Moran, N.F; Pattison, R.C; Rout, C; Schoon, M & Seabe, S.J. 2012. The impact of HIV infection on maternal deaths in South Africa. *South African Journal of Obstetrics and Gynaecology*, 2014. Health & Medical Publishing Group.

From: <http://www.sajog.org.za/index.php/SAJOG/article/view/581/307>. (Accessed 08/08/2014).

City Press. 2009. 28 June:6.

Collins English Dictionary. 2006. 2nd edition. Glasgow: Harper Collins.

Coovadia, H.M & Bland, R.M. 2007. Preserving practice through HIV epidemic. *Tropical Medicine & International Health*, 12(9).

From: <http://onlinelibrary.wiley.com/doi/10.1111/j.1356-1365.2007.01895.x/pdf>. (Accessed 09/05/2014).

Coovadia. 2010. The new WHO recommendations on HIV and infant feeding in resource limited settings – care for the mother: Let breast milk care for the baby. *South African Journal of Child Health*. From: <http://www.snac.org.za/news/items81>. (Accessed 10/05/2013).

Coovadia, A & Pienaar, L. 2013. South Africa's new highly effective PMTCT guidelines. *South African National Aids Council*. From: <http://www.sanac.org.za/news/item81> (Accessed 03/09/2014).

Craft, S.M; Delaney, R.O; Bautista, D.T & Serovich, J.M. 2007. Pregnancy decisions among women with HIV. *AIDS Behaviour*, 11(6):927-935.

From: <http://www.ncbi.nlm> (Accessed 14/07/2013).

Creswell, J.W. 2003. Research design: Qualitative, quantitative and mixed method approaches. 2nd edition. San Francisco. SAGE.

Creswell, J.W. 2009. Research design: 3rd edition. Thousand Oaks, CA: SAGE.

Delva, W; Draper, B & Temmerrman, M. 2006. Implementation of single-dose nevirapine for prevention of MTCT of HIV: Lessons from Cape Town. South Africa. *South African Medical Journal*, 98(8):706-709.

From: <http://www.samj.org.za/index.php/samj/article/view/1210/644>. (Accessed 20/09/2013).

Delva, W; Yard, E; Luchters, S; Chersich, M.F; Muigai, E; Oyier, V & Temmerrman, M. 2010. A safe motherhood project in Kenya: Assessment of antenatal attendance, service provision and implications for PMTCT. *Tropical Medicine and International Health*, 15(5):584-591. From: www.doi:10.1111/j.1365-3156.2010.02499.x. (Accessed 12/12/2013).

Delvaux, T; Elul, B; Ndagije, F; Munyana, E; Roberfroid, D & Asimwe, A. 2009. Determinants of non-adherence to a single-dose nevirapine regimen for the prevention of mother-to-child transmission in Rwanda. *Journal of Acquired Immune Deficiency Syndromes* 50:223-30. From: <http://www.ncbi.nlm.nih.gov/pubmed/19131884>. (Accessed 17/05/2014).

De Paoli, M.M; Mkhwanazi, N.B; Richter, L.M & Rollins, N. 2008. Early cessation of breastfeeding to prevent post-natal transmission of HIV: a recommendation in need of guidance. *Acta Paediatrica*, 97:1663-1668. From: <http://www.unicef.org/southafrica/SAF-resources-pmtctcommunication.pdf>. (Accessed 19/06/2014).

Department of Health [South Africa]. 2003. Infant feeding recommendation. Pretoria: National Department of Health.

Department of Health [South Africa]. 2010a. Policy and guidelines for the implementation of the PMTCT programme. Pretoria: National Department of Health.

Department of Health [South Africa]. 2010. National antenatal sentinel HIV and syphilis prevalence survey in South Africa: 2009. Pretoria: Department of Health.

Department of Health [South Africa]. 2011. Draft national action framework for 'No child born with HIV by 2015 and improving the health and wellbeing of mothers, partners and babies in South Africa. Pretoria: Department of Health.

Department of Health, North West Province. Bojanala Platinum District Profile. 2011. Rustenburg: Government Printers.

Department of Health [South Africa]. 2012a. The national antenatal sentinel HIV and syphilis prevalence survey in South Africa, 2011.

From: <http://www.whealth.gov.za/docs/reports/2013/Anntenatal>. (Accessed 08/04/2014).

Department of Health [KwaZulu-Natal]. 2012. KZN to recognize healthcare workers working towards the elimination of new paediatric HIV infections.

From: <http://www.kznhealth.gov.za/mediarelease/2012/pmmh30.8.12.htm>. (Accessed 30/06/2014).

Department of Health [South Africa]. 2013. The South African Antiretroviral Treatment Guidelines. PMTCT guidelines: revised March 2013. Pretoria: NDoH.

Department of Health [South Africa]. 2014. The HIV programme and implications for health systems strengthening in South Africa. NDoH.

De Vos, A; Strydom, H; Fouche'; C.B & Delport, C.S.L. 2011. Research at grass roots for the social sciences and human service professions. 4th edition. Pretoria: Van Schaik.

Dhlamini, L; Knight, L; Van Rooyen, H; Van Heerden, A & Jane Rotheram-Borus, M. 2012. Qualitative interviews with mentor mothers living with HIV: potential impact of role and coping strategies. *Journal of International AIDS Society*, 2:17391. From: <http://www.ncbi.nlm.nih.gov/pubmed/22789646>. (Accessed 17/05/2014).

Dikoff, J; James, P & Wiedenbach, E. 1998. Theory in a practice discipline. Part 1: Practice oriented theory. *American Journal of Nursing*, 7(5):435-468.

Doherty, T; Besser, M; Donohue, S; Kamoga, N; Stoops, N; Williason, I. & Visser, R. 2003. An evaluation of the PMTCT of HIV initiative in South Africa: Lessons and Recommendations. A report for the National Department of Health. Durban: Health Systems Trust.

Doherty, T; Chopra, M; Nsibande, D; Mngoma, D. 2009. Improving the coverage of the PMTCT programme through a participatory quality improvement intervention in South Africa. *Bio Medical Central Public Health*, 9:406.

From: <http://www.who.int/bulletin/volumes/91/1/12-106807/en/>. (Accessed 08/08/2014).

Dowshen-Atanda, N. 2012. HIV and AIDS.

From: <http://kidshealth.org/parent/infections/std/hiv.html>. (Accessed 04/07/2014).

Duff, P; Kipp, W; Wild, T.C; Rubaale, T & Okech-Ojony, J. 2010. Barriers to accessing highly active antiretroviral therapy by HIV-positive women attending an antenatal clinic in a regional hospital in western Uganda.

From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2954932/>. (Accessed 19/10/2013).

Du Bois, S. 2007. International HIV/AIDS Alliance: UK. Dexter Graphics.

Ekirapa-Kiracho, E; Waiswa, P; Rahman, H.M; Makumbi, F; Kiwanuka, N; Okui, O; Rutebenberwa, E; Bua, J; Mutebi, A; Nalwada, G; Serwadda, D; Pariyo, G.W & Peters, D.H. 2011. *Bio Medical Central International Health and Human Rights*, 11 (Supplement 1). From: <http://www.biomedcentral.com/1472-698X/11/S1/11>. (Accessed 09/10/2013).

Ekouevi, D.K; Leroy, V; Viho, A; Bequet, L; Horo, A; Rout, F; Sakarovitch, C; Welfens-Ekra, C & Dabis, F. 2004. Acceptability and uptake of a package to prevent mother-to-child transmission using rapid HIV testing in Abidjan, Cote d'Ivoire. *AIDS*, 18,

From: <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrive&db=PubMed&list-uids=15090779>. From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3384734/>. (Accessed 28/05/2012).

Farquhar, C. 2004. Antenatal couple councelling increases uptake interventions to prevent HIV-1 transmission. *Journal of Acquired Immune Deficiency Syndromes*. 2004: 37(5):1620-6. PUBMED:15577420.

From: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009468.pub2/full>. (Accessed 19/05/2014).

Farquhar, C; Kiarie, J.N; Richardson, B.A; Kabura, M.N; John, F.N; Nduati, R.W; Mbori-Ngacha, D.A & John-Steward, G.C. 2012. Antenatal couple counselling increases uptake of interventions to prevent HIV-1 transmission.

From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3384734/>. (Accessed 21/05/2014).

Fawcett, J. 1993. Analysis and evaluation of nursing theories. Philadelphia: F.A. Davis

Fawcett, J. 2003. Analysis and evaluation of nursing theories. Philadelphia: F.A Davis.

Fetch, W.K & Zgambo, M. 2012. A major challenge to successful implementation of prevention of mother-to-child transmission of HIV-1 programs in sub-saharan Africa. *International Scholarly Research Notices, Article ID 589817*.

From: <http://dx.doi.org/10.5402120121589817>. (Accessed 21/05/2014).

Ferguson, L. 2012. Linking women who test HIV-positive in pregnancy-related services to long-term HIV care and treatment services: A systematic review. *Tropical Medicine and International Health*,; 17(5):564-580.

Futterman, D; Shea, J; Besser, M; Stafford, S; Desmond, K; Comulada, W.S & Greco, E. 2010. Mamekhaya: a pilot study combining a cognitive-behavioral intervention and mentor mothers with PMTCT services in South Africa, AIDS Care. *Psychological and Socio-medical Aspects of AIDS/HIV*, 22(9):1093-1100.

From: <http://www.dx.doi.org/10.1080/09540121003600352>. (Accessed 21/05/2014).

Goga, A; Dinh, T & Jackson, D. 2012. Evaluation of the effectiveness of the national prevention of mother-to-child transmission (PMTCT) programme on infant HIV measured at six weeks postpartum in South Africa. Cape Town: Medical Research Council. From: <http://www.doh.gov.za/docs/reports/2012/pmtcteffectiveness.pdf> (Accessed 12/11/2012).

Gourlay, A; Birdthistle, I; Mburu, G; Lorpenda, K & Wringe, A. 2013. Barriers and facilitating factors to the uptake of antiretroviral drugs for prevention of mother-to-child transmission of HIV in sub-Saharan Africa: A systematic review. *Journal of the International AIDS Society*, 16(1):18588.

From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3717402/>. (Accessed 17/05/2014).

Graneheim, U.H & Lundman, B. 2004. Qualitative content analysis in nursing research concepts: Procedures and measures to achieve trustworthiness. *Nurse Education Today*, 24(2):105-112.

Gray, D.E. 2005. Doing research in the real world. London. Sage.

Green, J & Thorogood, N. 2009: Qualitative methods for health research. 2nd edition. London: Sage.

Grimwood, A; Fatti, G; Mothibi, E; Eley, B & Jackson, D. 2012. Progress of preventing mother-to-child transmission at primary healthcare facilities and district hospitals in three South African provinces. *South African Medical Journal*, 2012; 102(2).1-4. From: <http://www.samj.org.za/index.php/samj/article/view/5294/3850>. (Accessed 08/05/2012).

Grove, S.K; Burns, N & Gray, J.R. 2013. The practice of nursing research: Appraisal, synthesis and generation of evidence. 7th edition. China: Elsevier.

Health Sites-HCT/MMC Clinics. 2014. How to prevent your baby from getting HIV (PMTCT). From: <http://www.healthsites.org.za>. (Accessed 12/04/2014).

Holloway, I & Wheeler, S. 2000. Qualitative research in nursing. 2nd edition. Bournemouth University: Wiley.

Holloway, I & Walker, J. 2002. Getting a PhD in health and social care. London: Blackwell.

Ijumba, P; Doherty, T; Jackson, D; Tomlinson, M; Sanders, D & Pearson, L. 2013. Social circumstances that drive introduction of formula milk: An exploratory qualitative study in a peri-urban South African community. *Maternal Child Nutrition*, 2012; December 11. From: <http://www.mrc.ac.za/healthsystems/publications2012-13pdf>. (Accessed 20/08/2013).

Ilifa Labantwana. 2014. Programme reduces HIV/AIDS in South Africa's children: Early childhood development in South Africa.

From: <http://www.ilifalabantwana.co.za/2014/01/21/programme-reduces-hivaids/>. (Accessed 21/07/2014).

Invacerich, J.M & Mattenson, M.T. 2002. Organizational behaviour and management. 6th edition. New York: Mc Grave Hill.

Jones, S.A; Sherman, G.G & Varga, C. 2005. Exploring socio-economic conditions and poor follow-up rates of HIV-exposed infants in Johannesburg, South Africa. *AIDS Care*, 17(4):466-470.

Johnson, L.F. 2012. Access to antiretroviral treatment in South Africa, 2004-2011. *South African Journal of HIV and Medicine*, 13:22-27.

From: <http://www.who.int/bulletin/volumes/91/1/12-106807/en/>. (Accessed 08/082014).

Joubert, G. 2007. Epidemiology: A research manual for South Africa. 2nd edition. Cape Town: Oxford University Press.

Joubert, G & Ehrlich, R (eds). 2010. Epidemiology: A research manual for South Africa. 2nd edition. Cape Town: Oxford University Press.

Kagaayi, J. 2005. Maternal self-medication and provision of nevirapine to new-borns by women in Rakai , Uganda. *Journal of AIDS*, 39(1).

Kagee, A. 2008. Adherence to ARV therapy in the context of the national roll-out in South Africa: Defining a research agenda for psychology. *South African Journal of Psychology*, 38(2):414-428.

Kalembo, F.W & Zgambo, M. 2012. Loss to follow up: A Major challenge to successful implementation of prevention of mother-to-child transmission of HIV-1 programs in sub-saharan Africa. International Scholarly Research Network, 2012, Article ID: 589817. From: www.doi:10.5402/2012/589817 (Accessed 10/10.2013).

Karim, S.S; Churchyard, G.J & Lawn, S.D. 2009. HIV infection and tuberculosis in South Africa: An urgent need to escalate the public health response. *The Lancet*, 374 (9693):757-769.

Kasenga, F; Hurtig, R.H & Emmelin, M. 2007. Home deliveries: Implications for adherence to nevirapine in a PMTCT programme in rural Malawi. *AIDS Care*, 19:646-652.

Kasenga, F; Hurtig, R.H & Emmelin, M. 2010. HIV-positive women's experiences of a PMTCT programme in rural Malawi. *Midwifery*, 26(1):27-37.

Kebaabetswe, P.M. 2007. Barriers to participation in the prevention of mother-to-child transmission program in Gaborone, Botswana: A qualitative approach. *AIDS Care*, 19: 355-360.

Kgautle, E. 2009. *City Press*, 28 June 2009.

Kgatlwane, J; Madaki, H; Ogenyi, R; Moyo, S; Ekezie, C & Moroka, T. 2006. Factors that facilitate or constrain adherence to antiretroviral therapy among adults at four public health facilities in Botswana.

From: http://www.whqlibdoc.who.int/publications/2006/9241563281_eng.pdf. (Accessed 19/12/2012).

Khunou, M.M. 2010. Support for caregivers during puerperium to enhance the PMTCT programme. South African National ETD Portal.

From:

<http://www.netd.ac.za/?action=view&identifier=0ai:union.ndltd.org:unw/oai:dspace.nwu>. (Accessed 07/02/2014).

Kiarie, J.N; Kreiss, J.K; Richardson, B.A & John-Steward, G.C. 2003. Compliance with antiretroviral regimens to prevent perinatal HIV-1 transmission in Kenya. *AIDS*, 17(1):65-71.

Kiger, A. 2011. The state of the world's midwifery, delivering health, saving lives. United Nations Population Fund (UNFPA): New York.

Kinuthia, J; Kiarie, J.N; Farquhar, C; Richardson, B.A; Nduati, R & Mbori-Ngacha, D. 2011. Uptake of prevention of mother-to-child transmission interventions in Kenya: health systems are more influential than stigma. *Journal of International AIDS Society*, 14(61). From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3313883/>. (Accessed 08/08/2012).

Kirsten, I; Sewangi, J; Kunz, A; Dugange, F; Ziske, J; Jordan-Harders, B; Harms, G & Theuring, S. 2011. Adherence to combination prophylaxis for prevention of mother-to-child transmission of HIV in Tanzania. *PLoS One*, 6(6):e21020.

Kreuger, L. & Neuman, W. 2006. Social work research methods: Qualitative and quantitative applications. Boston. Pearson Education Inc.

Kuonza, L.R; Tshuma, C.D; Shambira, G.N & Tshimanga, M. 2010. Non-adherence to the single dose nevirapine regimen for the prevention of mother-to-child transmission of HIV in Bindura town, Zimbabwe: A cross-sectional analytic study. *Bio Medical Central Public Health*, 10:218.

Kurewa, E.N; Kandawasvika, G.Q; Mhlanga, F; Munjoma, M; Mapingure, M.P; Chandiwana, P; Chirenje, M.Z; Rusakaniko, S & Stray-Pedersen, B. 2011. Realities and challenges of a five year follow up of mother and child pairs on a PMTCT program in Zimbabwe. *The Open AIDS Journal*, 5:51-58.

From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3134989/>. (Accessed 22/05/2014).

Laher, F; Cescon, A; Lazarus, E; Kaida, A; Makongoza, M; Hogg, R.S; Soon, C.N; Miller, C.L & Gray, G. 2012. Conversations with mothers: Exploring reasons for prevention of Mother-to-Child Transmission (PMTCT) – Failures in the era of programmatic scale-up in Soweto, South Africa. *AIDS*, 16:91-98, 1 January 2011. Springer Science+Business Media, LLC 2010.

Largade, M; Haines, A & Palmer, N. 2007. Conditional cash transfers for improving uptake of health interventions in low-and middle-income countries: a systematic review. *Journal of American Medical Association*. 298(16):1900-10. From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3134989/>. (Accessed 12/12/2013).

Leon, N; Lewin, S & Mathews, C. 2013. Implementing a provider-initiated testing and counselling (PITC) intervention in Cape Town, South Africa: A process evaluation using the normalisation process model. *Implementation Science*, 8:97.

Lincoln, Y.S & Guba, E.A. 1985. Naturalistic inquiry. California: Sage.

Lincoln, M & Guba, E.G. 1985. Criteria for assessing trustworthiness of naturalistic inquiry. Thousand Oaks: Sage.

LoBiondo-Wood, G & Haber, J. 2005. Nursing research: methods, critical appraisal and utilization. 6th edition. St Louis: A Mosby.

LoBiondo-Wood, G & Haber, J. 2010. Nursing research: methods, critical appraisal and utilization. 7th edition. St Louis: A Mosby.

Magaso, F.B. 2011. Assessing the barriers to accessing prevention of mother-to-child transmission (PMTCT) services in Marondera Zimbabwe. Master of Public Health (Health Economics) dissertation. Cape Town: University of Cape Town.

Management Sciences for Health (MSH). 2014. South African Health Centre doubles number of infants tested for HIV in six months. *MSH November 29, 2010*. From: <http://www.msh.org/news-events/stories/>. (Accessed 13/06/2014).

Manzi, M; Zachariah, R; Teck, R; Buhendwa, L; Kazima, J; Bakali, E; Firmenich, P & Humblet, P. 2005. High acceptability of voluntary counselling and HIV-testing but unacceptable loss to follow in a prevention of mother-to-child HIV transmission programme in rural Malawi: Scaling-up requires a different way of acting. *Tropical Medicine and International Health*, 10(12):1242-1250.

Maputle, M.S & Jali, M.N. 2008. Pregnant women's knowledge about mother-to-child transmission (MTCT) of HIV infection through breastfeeding. From: <http://www.ncbi.nih.gov/pubmed/18592948>. (Accessed 17/05/2014).

Marcos, Y; Phelps, B.R & Bechman, G. 2012. Community strategies that improve care and retention along the prevention of mother-to-child transmission of HIV cascade: A review. *Journal of the International AIDS Society*.

From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3499877/>. (Accessed 21/05/2014).

Marshall, C & Rossman, G.B. 2011. Designing qualitative research. 5th edition. UK: SAGE.

Mateo, M & Foreman, M. 2014. Research for advanced practice nurses. From evidence to practice. 2nd edition. USA: Springer Publishing Company.

Mayberry, L.J & Gennaro, S. 2001. A quality of health outcomes model for guiding obstetrical model practice. *Journal of Nursing Scholarship*, 33:2:141-146.

McIntyre, D.I; Thiede, M & Birch, S. 2009. Access as a policy-relevant concept in low-and middle-income countries. *Health Economics, Policy and Law*, 4(2):179-193.

McNamara, O. 2008. Non-profit management guidelines.

From: <http://www.google.com/?gws-rd=/#McNamara>. (Accessed 10/10/2011).

Meleis, A.L. 1991. Theoretical nursing development and progress. 2nd edition. Philadelphia: Lippincott.

Mepham, S; Zondi, Z; Mbuyazi, A; Mkhwanazi, N & Newell, M.C. 2011. Challenges of PMTCT antiretroviral adherence in northern KwaZulu-Natal, South Africa. *AIDS Care: Psychological and Socio-medical Aspects of HIV/AIDS*.

From: <http://www.tandfonline.com/doi/abs/10.1080/09540121.2010.516341>. (Accessed 11/09/2013).

Mitchel, P.H & Lang, N.M. 2004. Framing the problem of measuring and improving health care quality. Has the Quality Health Outcomes Model been useful? *Medical Care, Volume 42(2)*:4-11.

Mitchel, P.H; Ferketich, S & Jennings, B.M. 1998. Quality Health Outcome Model Image: *Journal of Nursing Scholarship*, 30(1):43-46.

Monama, E.M. 2009. Challenges of primary health care service delivery at the district level in the health care system in South Africa: A management perspective. Doctoral Thesis: Pretoria: Unisa.

Mouton, J. 2001. How to succeed in your master's and doctoral studies: A South African guide and resource book. Pretoria: Van Schaik.

Msuya, S.E; Mbizvo, E.M; Hussain, A; Uriyo, J; Sam, N.E & Stray-Pedersen, B. 2008. Low male partner participation in antenatal HIV counselling and testing in northern Tanzania: Implications for preventive programs. *AIDS Care*, 20(6):700-709.

Muchedzi, A; Chandisarewa, W; Keatinge, J; Stranix-Chibanda, L; Woelk, G; Mbizvo, E & Shetty, A.K. 2010. Factors associated with access to HIV Care and treatment in a prevention of mother-to-child transmission programme in urban Zimbabwe. *Journal of the International AIDS Society*, 13:38.

From: <http://www.jiasociety.org/content/13/1/38>. (Accessed 21/05/2014).

Mugore, L; Engelsman, B; Ndore, T; Dabis, F & Perez, F. 2008. An assessment of the understanding of the offer of routine HIV testing among pregnant women in rural Zimbabwe. *Aids Care Psychological and Socio-Medical Aspects of AIDS/HIV*, 13(6):660-666.

Muller, M; Bezuidenhout, M.C & Jooste, K. 2011. Health Services Management. Cape Town: Juta.

Nakayiwa, S; Abang, B; Packel, L; Lifshay, J; Purcell, D.W; King, R; Ezati, E; Mermin, J; Coutinho, A & Bunnell, R. 2006. Desire for children and pregnancy risk behaviour among HIV-infected men and women in Uganda.

From: <http://www.ncbi.nlm.nih.gov/pubmed/16715343>. (Accessed 20/01/2014).

National Department of Health [South Africa]. 2010a. HIV Counselling and Testing Policy Guidelines. Pretoria: NDoH.

National Department of Health [South Africa]. 2010b. Clinical guidelines: Prevention of mother-to-child transmission (PMTCT). Pretoria: NDoH.

National Department of Health [South Africa]. 2011a. The National antenatal sentinel HIV and syphilis prevalence survey in South Africa. Pretoria: NDoH.

National Department of Health [South Africa]. 2011b. National action framework for 'No child born with HIV by 2015, and improving the health and wellbeing of mothers, partners and babies in South Africa. Pretoria: NDoH.

National Department of Health [South Africa]. 2012/2013. Annual Report. Pretoria: NDoH.

National Department of Health [South Africa]. 2013. The South African Antiretroviral Treatment Guidelines 2013. PMTCT guidelines:revised March 2013. Pretoria: NDoH

National Department of Health [South Africa]. 2014. Joint Review of HIV, TB, and PMTCT Programmes in South Africa Main Report, April 2014. Pretoria: NDoH.

National Strategic Plan on HIV, STIs and TB. 2012-2016. Summary: 19. Pretoria: NDoH.

Nebie, Y; Meda, N; Leroy, V; Mandelbrot, L; Yaro, S; Sombie, I; Cartoux, M; Tendrebeogo, S; Dao, B; Ouangre, A; Nacro, B; Fao, P; Ky-Zerbo, O; Van de Perre, P & Dabis F. 1999. Sexual and reproductive life of women informed of their HIV seropositivity: A prospective cohort study in Burkina Faso. *Journal of Acquired Immune Deficiency Syndrome*, 28(4):367-372.

Ngemu, E.K; Khayeka-Wandabwa, C; Kweka, E.J; Choge, J.K; Anino, E & Oyoo-Okoth, E. 2014. Effectiveness of option highly active antiretroviral therapy (HAART) prevention of mother-to-child transmission (PMTCT) in pregnant HIV women. BMC Research Notes. From: <http://pubmedcentralcanada.ca/pmcc/articles/PMC3898637/>. (Accessed 01/07/2014).

Ngidi, W; Reddy, J; Luvuno, Z; Rollins, N; Baker, P & Mate, K.S. 2013. Using a campaign approach among health workers to increase access to antiretroviral therapy for pregnant HIV-infected women in South Africa. *Journal of Acquired Immune Deficiency Syndromes*, 63(4):133-139.

From: <http://www.scopus.com/record/display.url?origin=cited&eid=2-s2.0-84880249303>. (Accessed 16/08/2013).

Nguyen, T.A. 2009. Access to comprehensive prevention of mother-to-child transmission program: Obstacles and implications.

From: <http://dare.uva.nl.record/305844>. (Accessed 10/10/2013).

Nicoll, K.H. 1992. Perspectives on nursing theory. 2nd edition. Philadelphia: JB Lippincott.

Nkoki, L.L; Doherty, T.M; Hill, Z; Chopra, M; Schaay N & Kendall C. 2007. Missed opportunities for participation in prevention of mother-to-child transmission programmes: Simplicity of nevirapine does not necessarily lead to optimal uptake, a qualitative study.

From: <http://www.aidsrestherapy.com/content/4/1/27>. (Accessed 10/06/2013).

Nobrega, A. A; Oloveira, F. A; Galvao, M.T; Mota, R.S; Barbosa, R.M & Dourando, I. 2007. Desire for a child among women living with HIV/AIDS in northeast Brazil. *AIDS Patient Care*, 21(4):261-267.

From: <http://www.ncbi.nlm.nih.gov/pubmed/17461721>. (Accessed 22/10/2013).

Nxumalo, J. 2014. The long battle against HIV/AIDS in Swaziland. *Nursing Update*, 38 (5):39.

Ochigbo, B.B.E. 2013. Adherence to PMTCT antiretroviral therapy among HIV infected pregnant women in Area W Clinic, Francistown, Botswana. Cape Town: Stellenbosch University. From: <http://www.scholar.sun.ac.za>. (Accessed 12/12/2013).

O'Gorman, D.A; Nyirenda, L & Theobald, S.J. 2010. Prevention of mother-to-child transmission of HIV infection: Views and perceptions about swallowing nevirapine in rural Lilongwe, Malawi. *Bio Medical Central Public Health*, 10:354.

Okonkwo, K.C; Reich, K; Alabi, A.I; Umeike, N. & Nachman, S.A. 2007. An evaluation awareness: attitudes and beliefs of pregnant Nigerian women toward voluntary counselling and for HIV. *AIDS Patient Care and Sexual transmitted diseases*, 21(4):252-260.

Olugbenga-Bello, A.I; Adebimpe, W.O; Osundina, F.F & Abdulsalam, S.T. 2013. Perception on prevention of mother-to-child-transmission (PMTCT) of HIV among women of reproductive age group in Osogbo, Southwestern Nigeria. *International Journal of Women's Health*.

From: <http://pubmedcentralcouldada.ca/pmcc/articles/PMC3712739/>. (Accessed 01/07/2014).

Oxford Advanced English Dictionary. 6th edition. New York City: University Press.

Page, J; Louw, M & Pakkiri, D. 2006. Working with HIV and AIDS. Cape Town: Juta.

PAHO/WHO, UNICEF, CENSIDA & Mexico. 2002. Regional consultation on the use of communication for PMTCT. Cuernavaca, Mexico: PAHO/WHO, UNICEF and CENSIDA.

Painter, T.M; Diaby, K.L; Matia, D.M; Lin, L.S; Sibailly, T.S; Kouassi, M.K; Ekpini, E.R; Roels, T.H & Wiktor, S.Z. 2004. Women's reasons for not participating in follow up visits before starting short course antiretroviral prophylaxis for prevention of mother-to-child transmission of HIV: A qualitative interview study.

From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC516104/>. (Accessed 21/05/2014).

PALSA PLUS. 2012. Comparing adult antenatal-clinic based HIV prevalence with prevalence from national population based surveys in sub-Saharan Africa. UNAIDS Presentation at the University of Cape Town Lung Institute. 2012. *Health and HIV/AIDS in South Africa*.

From: <http://www.knowledgetranslation.co.za/content/programmes.html>. (Accessed 14/10/2013).

Parse, R.R. 1987. Nursing Science: Major paradigms, theories, and critiques. Philadelphia: Saunders.

Pattinson, R; Etsane, E & Snyman, J. 2007. Report to UNICEF on the scaling-up of the basic antenatal care quality improvement programme in two sub-districts per province in South Africa. The University of Pretoria Maternal and Infant Health Care Strategies Research Unit: Pretoria.

Peltzer, K; Mosala, T; Shisana, O; Nqeketo, A. & Mngqundaniso, N. 2007. Barriers to prevention of HIV transmission from mother-to-child (PMTCT) in resource –poor setting in the Eastern Cape, South Africa. *African Journal of Reproductive Health*, 11(1):57-66.

Peltzer, K; Chao, L & Dana, P. 2008. Family planning among HIV-positive and negative Prevention of Mother-to-child Transmission (PMTCT) clients in a resource poor setting in South Africa. *AIDS Behaviour*, 13:973-979.

Peltzer, K; Mosala, T; Dana, P & Fomundam, H. 2008. Follow-up survey of women who have undergone a prevention of mother-to-child transmission program in a resource poor setting in South Africa. *Journal Association Nurses AIDS Care. 2008 n Nov-Dec; 19(6):450-460.*

From: <http://www.ncbi.nih.gov/pubmed/19007723>. (Accessed17/05/2014).

Peltzer, K; Mlambo, M; Phaswana-Mafuya, N & Ladazni, R. 2010. Determinants of adherence to a single-dose nevirapine regimen for prevention of mother-to-child transmission in Gert Sibande District in South Africa. *Acta Paediatr. 99(5):699-704.*

Perez, F; Orne-Gliemann, J; Mukotekwa, T; Miler, S; Glenshaw, M; Mahomva, A & Dabis, F. 2004. "Prevention of mother-to-child transmission of HIV: Evaluation of a pilot programme in a district hospital in rural Zimbabwe. *Bio Medical Journal*, 329:7475.

Polit, D.F & Beck, C.T. 2004. Nursing research principles and methods. 7th edition. Philadelphia: Lippincott Williams & Wilkins.

Polit, D.F & Beck, C.T. (eds). 2008. Essentials of nursing: Research, methods, appraisal and utilization. 8th edition. Philadelphia: Lippincott.

Polit, D.F & Beck, C.T. (eds). 2012. Nursing research: Generating and assessing evidence for nursing practice. 9th edition. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins.

Population Council. 2014. Ideas, evidence, impact: Prevention of mother-to-child transmission of HIV. From: <http://www.popcouncil.org/research/prevention-of-mother-to-child-transmission-of-HIV>. (Accessed 04/08/2014).

President's Emergency Plan for AIDS Relief (PEPFAR). 2011. PEPFAR guidance on integrating prevention of mother-to-child transmission of HIV, maternal, neo-natal and child health and paediatric HIV services. Pretoria: NGO Printers.

President's Emergency Plan for AIDS Relief (PEPFAR). 2014. Partnership to Fight HIV/AIDS in South Africa. PEPFAR in North West Province. Revised: January 2014. Pretoria: Government Printer.

Radwin, L & Fawcet, J. 2002. Methodological issues in nursing research: A conceptual model-based programme of nursing research, retrospective and prospective applications. *Journal of Advanced Nursing*, 40(3):355-360.

From: <http://onlinelibrary.wiley.com/doi/10.1046/j.4365-2648.2002.02377.x/pdf> (Accessed 19/10/2012).

Rajumba, J; Tumwine, J.K; Tylleskar, T; Neema, S & Heggenhougen, H.K. 2012. Listening to health workers: lessons from Eastern Uganda for strengthening the programme for the prevention of mother-to-child transmission of HIV. *BMC Health Services Research*.

From: <http://pubmedcentralcouldada.ca/pmcc/articles/PMC3280189/>. (Accessed 10/01/2013).

Rajumba, J; Neema, S; Tumwine, J.K; Tylleskar, T & Heggenhougen, H.K. 2013. Pregnant women's experiences of routine counselling and testing for HIV in Eastern Uganda: A qualitative study.

From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3665685/>. (Accessed 28/06/2013).

Raphela, R.E. 2011. Training of health care workers in adherence counselling for comprehensive, care, management and treatment clinics.Master's Dissertation. Cape Town: University of Stellenbosch, Africa Centre for HIV/AIDS Management.

Reed, P.G & Lawrence, L. 2008. A paradigm for the production of practice-based knowledge. *Journal of Nursing Management* 16(4):422-432.

Republic of South Africa. 2012. Global AIDS response progress report 2012. Pretoria: Government Printers.

Republic of South Africa. 2013. Global AIDS response progress report 2013. Pretoria. Government Printers.

Rispel, L.C; Peltzer, K; Phaswana-Mafuya, N; Metcalf, C.A & Treger, L. 2009. Assessing missed opportunities for the prevention of mother-to-child HIV transmission in an Eastern Cape local area. *South Africa Medical Journal*, 99(3):174-179.

Rochon, D. 2012. HIV-positive and Pregnant: Defying the social order. *Women's Health and Urban Life*; May 11(1):54-75. (Accessed 20/08/2013).

Sarker, M; Papy, J; Traore, S & Neuham, F. 2009. Insights on HIV pre-test counselling following scaling-up of PMTCT program in rural health posts, Burkina Faso. *East African Journal of Public Health* 6(3):283-289.

Schroder, S.A. 2007. We could do better improving the health of the American people. *The New England Journal of Medicine*.

From: <http://www.nejm.org/doi/full/10.1056/NEJmsa073350>. (Accessed 19/10/2013).

Scotland, G.S; van Teljilingen, E.R; van der Pol, M & Smith, W.C. 2003. A review of studies assessing the costs and consequences of interventions to reduce mother-to-child HIV transmission in sub-Saharan Africa. *AIDS*, 17(17).

Semraua, K; Kuhn; L; Vwalika, C; Kasonde, P; Sinkala, M, Kankasa, C; Shutese, E; Aldrovandi, G & Thea, D.M. 2005. Women in couples antenatal HIV counselling and testing are not more likely to report adverse social events. *AIDS*, 19(6). From: <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list-uids=15802979>. (Accessed 28/05/2012).

Sewnunan, A. 2013. Influence of the home environment on prevention of mother-to-child transmission (PMTCT) of HIV. Master's dissertation (MA Health). Pretoria: Unisa

Shehu, D; Ikeh, A.T & Kuna, M.J. 1997. Mobilizing transport for obstetric emergencies in north western Nigeria: The Sokoto PMM Team.

From: <http://www.ncbi.nlm.nih.gov/pubmed/9389629>. (Accessed 20/05/2014).

Shenton, A.K. 2004. Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22:63-75.

Silverman, D. 2010. Doing qualitative research: A practical handbook. 3rd edition. London: Sage Publications.

Shikongo, K.I. 2008. Strategies to facilitate application of sociology of development to nursing practice. Doctoral Thesis. Windhoek: University of Namibia.

Shisane, O; Rehle, T; Simbayi; L.C; Zuma, K; Jooste, S; Zungu, N; Labadarios, D & Onoya, D. 2014. South African National HIV Prevalence, Incidence and Behaviour Survey, 2012. Cape Town. HSRC Press.

Skinner, D; Mfecane, S; Henda, N; Dorkenoo, E; Davids, A. & Shisana, O. 2003. Situational analysis of PMTCT services in regions of the Eastern Cape. Cape Town, HSRC Press.

Skinner, S; Mfecane, S; Gumede, T; Henda, N. & Davids, A. 2005. Barriers to accessing PMTCT services in a rural area of South Africa. *African Journal of AIDS Research*, 4(2):115-123.

South Africa. 2008. Policy and guidelines for the implementation of the PMTCT programme. From: <http://www.spmtct-f.html>. (Accessed 10/08/2012).

South Africa. 2010. National antenatal sentinel HIV and syphilis prevalence in South Africa, 2009. Pretoria: Government Printers.

South Africa (Republic). HIV & AIDS and STI strategic plan for South Africa (NSP2007-2011): Pretoria: Department of Health.

South Africa (Republic). Department of Health, 2010 national HIV counselling and testing (HCT) guidelines. Pretoria. Department of Health.

South Africa (Republic). Department of Health national strategic plan on HIV, STI & TB 2012-2016: Pretoria: Department of Health.

Sowell, R.L; Murdaugh, C.L; Addy, C.L; Moneyham, L & Tavokoli, A. 2002. Factors influencing intent to get pregnant in HIV-infected women living in the Southern USA. *AIDS Care*, 14(2):181-191.

From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC.2151976/>. (Accessed 12/10/2011).

Sprague, C; Chersich, M & Black, V. 2011. Health system weakness constrain access to PMTCT and maternal HIV services in South Africa: a qualitative enquiry. *AIDS Research and Therapy* 8:10. Johannesburg. BMC.

Strengthening South Africa's Response to HIV and Health (SARRAH). 2014. Support for HIV and Health. From: <http://www.sarrahsouthafrica.org/SUPPORTFORHIV> and health/qualityofservice. (Accessed 03/09/2014).

Stinson, K & Myer, L. 2012. Barriers to initiating antiretroviral therapy during pregnancy: a qualitative study of women attending services in Cape Town, South Africa. *African Journal of AIDS Research*, 11(1):65-73.

From: <http://www.nisc.co.za/oneAbstract?absId=4261>. (Accessed 20/05/2014).

Streubert, H.J & Carpenter, D.R. 2011. Qualitative research in nursing: Advancing the humanistic imperative. 5th edition. Philadelphia: Lippincott, Williams & Wilkins.

Stringer, J.S; Sinkala, M; Maclean, C.C; Levy, J; Kankasa, C; Degroot, A; Stringer, E.M; Acosta, E.P; Goldenberg, R.L & Vermund, S.H. 2003. Effectiveness of a city-wide program to prevent mother-to-child HIV transmission in Lusaka, Zambia. *AIDS*, 19(12):1309-1315.

Stringer, D; Mfecane, S; Gumede, T; Henda, N & Davids, A. 2005. Barriers to accessing PMTCT services in a rural area of South Africa. *African Journal of AIDS Research*, 4:115-123.

Stringer, J.S; Sinkala, M; Stout, J.P; Goldenberg, R.L; Acosda, E.P; Chapman, V; Kumwenda-Phiri, R & Vermund, S.H. 2003. Comparison of two strategies for administering nevirapine to prevent perinatal HIV transmission in high-prevalence, resource-poor settings. *Journal of Acquired Immune Deficiency Syndrome*, 32(5):506.

Supatsela Leading the way: Internal newsletter. 2012. 6 July: Issue 60. Pretoria: Department of Health.

Tearfund. 2008. Scaling-up prevention of mother-to-child transmission of HIV. Summary document. From: <http://tiz.tearfund.org/webdocs/tilz/HIV/C8786-we.pdf>. (Accessed 19/04/2013).

Teasdale, C.A & Besser, M.J. 2008. Enhancing PMTCT programmes through psychosocial support and empowerment of women: the mothers2mothers model of care. *South Africa Journal of HIV Medicine*, 9:60-64.

Temmerman, M. 2003. Mother-to-child HIV transmission in resource poor settings: How to improve coverage?" *AIDS*, 17(8).

Theilgaard, Z.P; Katzenstein, T.L; Chiduo, M.G; Pahl, C; Bygbjerg, I.C; Gerstoft, J; Lemnge, M.M & Tersbol, B.P. 2011. Addressing the fear and consequences of stigmatization-a necessary step towards making HAART accessible to women in Tanzania: a qualitative study. *AIDS Research Therapy*, 8:28. Bio Medical Central. From: <http://www.ncbi.nlm.nih.gov/pmc/article/PMC3173282/>. (Accessed 20/05/2014).

Theuring, S; Mbezi, P; Luvanda, H; Jordan-Hader, B; Kunz, A; & Harms, G. 2009. Male involvement in PMTCT services in Mbeya Region, Tanzania. *AIDS Behaviour*, 13 (Supplement 1):92-102.

Thorsen, V.C; Sunby, J; Martison, F. 2008. Potential initiators of HIV-related stigmatization: ethical and programmatic challenges for PMTCT programs. *Developed World Bioethics*; 8:43-50.

Tlebere, P; Jackson, D; Loveday, M; Matizirofa, L; Mbombo, N; Doherty, T; Wigton, A; Treger, L & Chopra, M. 2007. Community-based situation analysis of maternal and neonatal care in South Africa to explore factors that impact utilization of maternal health services. From: <http://www.doi:10.1016/j.jmwh.2007.03.016>. (Accessed 19/10/2013).

Tonwe-Gold, B., Ekouevi, D.K; Bosse, C.A; Toure, S; Kone, M; Becquet, R; Leroy, V; Toro, P; Dabis, F; Sard, W.M & Abrams, E.J. 2009. Implementing family-based HIV care and treatment: The first two years' experience of the mother-to-child transmission-plus program in Abidjan, Cote d'Ivoire. *Tropical Medicine and International Health*, 14(2):204-212.

Toure, H; Audibert, M & Dabis, F. 2010. To what extent could performance-based schemes help increase the effectiveness of PMTCT programmes in resource-limited settings? A summary of the published evidence. *Bio Medical Central*, 10:702.

Tsague, L; Tsioris, F.O; Carter, R.J; Mugisha, V; Tene, G; Nyankesha, E; Koblavi-Deme, S; Mugwaneza, P; Kayirangwa, E; Sahabo, R & Abrams, E.J. 2010. Comparing two service delivery models for the prevention of mother-to-child transmission (PMTCT) of HIV during transition from single-dose nevirapine to multi-drug antiretroviral regimens. *Bio Medical Central Public Health*, 10:753.

From: <http://www.biomedcentral.com/1471-2458/10/753>. (Accessed 19/07/2013).

Turan, J; Nyblade, L & Mofison, P. 2012. Stigma and discrimination: Key barriers to achieving global PMTCT and maternal health goals. Washington, DC: Futures Group Health Policy. From: <http://www.healthpolicyproject.com>. (Accessed 19/05/2013).

Ulin, P.R; Robinson, E.T & Tolley, E.E. 2005. Qualitative methods in public health. A field guide for applied research. USA: Jossey-Bass.

UNAIDS. 2010. Global report. UNAIDS report on the AIDS epidemic.

UNAIDS. 2011a. Terminology guidelines. January 2011:22.

UNAIDS. 2011b. Joint United Nations programme on HIV/AIDS. World AIDS Day Report. Geneva: UNAIDS.

UNAIDS/Global AIDS. 2014. Response progress reporting 2014. Construction core Indicators for monitoring the 2011 United Nations political declaration on HIV and AIDS. Switzerland: UNAIDS/WHO/UNICEF.

UNICEF. 2003a. Evaluation of United Nations-supported pilot projects for prevention of mother-to-child transmission of HIV.

From: <http://www.oecd.org/LongAbstract/0,2546.en-35038640-35074394-35160447-35046507-1-1-1,00.hiv>. (Accessed 28/05/2012).

UNICEF. 2003b. Global Report: Evaluation of United Nations Supported Pilot Projects for the prevention of mother-to-child transmission of HIV. UNICEF Evaluation database.

UNICEF/UNAIDS/WHO. 2008. Children and AIDS: Second stocktaking report. From: <http://www.unicef.org/media/media-43458.html>. (Accessed 11/09/2012).

UNICEF. 2009. The state of the world's children: Maternal and new-born health. New York: United Nations Children's Fund (UNICEF).

UNICEF. 2010. Children and HIV and AIDS: Introduction – HIV data. From: <http://www.unaids.org>. (Accessed 15/06/2011).

UNICEF [South Africa]. 2013. Eliminating mother-to-child HIV transmission in South Africa. UNICEF.

United Nations Statistics. 2010. Report on Global HIV/AIDS epidemic.

Van der Walt, C & Van Rensburg, G. 2010. Fundamentals of research methodology for health care professionals. 2nd edition. Cape Town: Juta.

Van Dyk, A.C. 2012. HIV and AIDS education, care and counselling: A multidisciplinary approach. 5th edition. Cape Town: CTP Printers.

Varga, C.A. 2005. HIV-disclosure in the context of vertical transmission: HIV-positive mothers in Johannesburg, South Africa. *AIDS Care*, 18:952-960.

Varga, C. & Brooks, H. 2008. Factors influencing teen mothers' enrolment and participation in prevention of mother-to-child HIV transmission services in Limpopo Province, South Africa. *Qualitative Health Research*, 18(6):786-802.

Walcott, M.M; Hatcher, A.M; Kwena, Z & Turan, J.M. 2013. Facilitating HIV status disclosure for pregnant women and partners in rural Kenya: A qualitative study. *BMC Public Health*, 13:1115.

From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3907031/>. (Accessed 21/02/2014).

Watson, R; Mckenna, H; Cowman, S & Keady, J. 2008. Nursing research designs and methods Europe, Australia, Canada, USA. Elsevier.

Watson-Jones, D; Balira, R; Ross, D.A; Weiss, H.A & Mabey, D. 2012. Missed opportunities: Poor linkages into on-going care for HIV-positive pregnant women in Mwanza, Tanzania. DOI: 10.1371/journal.pone.0040091, July 09, 2012. From: <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0040091>. (Accessed 17/05/2014).

WHO. 2003a. Guidelines for decision-maker.

From: <http://www.who.int/nutrition/publications/infantfeeding/en/>. (Accessed 09/10/2012).

WHO. 2003b. HIV-infected women and their families: Psychosocial support and related issues, a literature review. Geneva, Switzerland.

WHO. 2005. The World Health Report 2005. From: <http://www.who.int/whr/2005/en/>. (Accessed 11/09/ 2012).

WHO. 2006. HIV and Infant-feeding consultations, Oct 25-27. Geneva. WHO.

WHO. 2007. PMTCT briefing note: Department of HIV/AIDS. Geneva: World Health Organization (WHO).

WHO & UNICEF. 2007. Guidance on global scale-up of the prevention of mother-to-child transmission of HIV: Towards universal access for women, infants and young children and eliminating HIV and AIDS among children. Geneva: WHO. From: http://www.unicef.org/aids/files/PMTCT_enWEBNov26.pdf. (Accessed 09/09/2012).

WHO, UNAIDS & UNICEF. 2008. Towards universal access: Scaling up priority HIV/AIDS interventions in the health sector; Progress report. Geneva: World Health Organization (WHO).

WHO. 2008. Sexual and reproductive health and linkages: evidence review and recommendations. Geneva: WHO.

WHO. 2010a. World health statistics. 2010. Geneva, Switzerland: WHO.

WHO. 2010b. Antiretroviral drugs for treating pregnant HIV infection in infants: Towards universal access: Recommendations for a public health approach (2010 version). Geneva, Switzerland: WHO.

WHO. 2010c. Guidelines on HIV and infant feeding 2010: Principles and recommendations for infant feeding in the context of HIV and a summary of evidence. Geneva, Switzerland: WHO.

WHO. 2010d. Antiretroviral drugs for treating pregnant women and preventing HIV infection of infants: Recommendations for a public health approach. From: http://whqlibdoc.who.int/publications/2010/9789241599818_eng.pdf. (Accessed 22/02/2013).

WHO. 2013. Women's experiences in services for preventing the mother-to-child transmission of HIV: A literature review. USA: WHO.

WHO/UNAIDS/UNICEF. 2010. Towards universal access: Scaling up priority HIV/AIDS interventions in the health sector. Geneva, Switzerland: WHO.

WHO/UNAIDS/UNICEF. 2011. Global HIV/AIDS response: Epidemic update and health sector progress towards universal access. Progress report. Geneva: WHO.

Wilfert, C. 2006. Site-specific factors influencing access to PMTCT services, trends with time and suggestions for Involvement. *Proceedings of the XVI International AIDS Conference; August 13-18*: Toronto, Couladada.

From: (<http://www.kaisernetwork.org/aids2006/>). (Accessed 11/09/2012).

Winestone, L.E; Bukusi, E.A; Cohen, C.R; Kwaro, D; Schmidt, N.C & Turan, J.M. 2012. Acceptability and feasibility of integration of HIV care services into antenatal clinics in rural Kenya: A qualitative provider interview study. *Global Public Health*, 7(2):149-163. From: <http://pubmedcentralcouladada.ca/pmcc/articles/PMC3717402/>. (Accessed 01/07/2014).

Woldesenbet, S; Goga, A.E; & Jackson, D.J. 2012. The South African Programme to prevent mother-to-child transmission of HIV (PMTCT): Evaluation of systems for Early Infant Diagnosis in Primary Health Care Facilities in South Africa: Report on Results of Situational Assessment, 2010. South African Medical Research Council.

Youngleson, M.S; Nkurunziza, P; Jennings, K; Arendse, J; Mate, K.S & Baker, P. 2010. Improving a mother-to-child HIV transmission programme through health system redesign: quality improvement, protocol adjustment and resource addition. *Plos ONE*, 5(11): e13891. doi:10.1391/journal.pone.0013891.

INTERNET SOURCES

<http://www.ask.com/questions>. (Accessed 12/12/2013).

<http://www.EzineArticles.com/1558273>. (Accessed 24/06/2014).

<http://www.localgovernment.co.za/locals/view/188/Madibeng-Local-Municipality>.
(Accessed 05/06/2015).

<http://www.managementstudyguide.com/swot-analysis.htm>. (Accessed 22/07/2014).

<http://www.WorldStateman.org>. (Accessed 19/08/2013).

APPENDIX A: LETTER OF REQUEST FOR PERMISSION TO CONDUCT THE STUDY

1178 UNIT X EXTENSION
MABOPANE
0190
25 May 2012

THE NORTH WEST DEPARTMENT OF HEALTH
PRIVATE BAG X 2068
MMABATHO
2735

DEAR SIR/MADAM

APPLICATION TO CONDUCT A STUDY/ RESEARCH ON STRATEGIES TO FACILITATE THE AVAILABILITY AND ACCESSIBILITY OF THE PMTCT PROGRAMME IN BOJANALA HEALTH DISTRICT OF THE NORTH WEST PROVINCE: SOUTH AFRICA

I, Debbie Habedi, am currently enrolled for the degree D. Litt et Phil in Health Studies at University of South Africa (UNISA) under supervision of Prof A. Nolte and Dr A. Temane. I hereby request to conduct a research study entitled "Strategies to facilitate the availability and accessibility of the PMTCT programme in Bojanala Health District". The main purpose of this study is to determine the accessibility and availability of the PMTCT programme in the Bojanala Health District of North West Province, with an aim to develop strategies to facilitate the availability and accessibility of the PMTCT programme to HIV-positive pregnant women. The study will involve the staff and the patients at the PMTCT and VCT clusters of Madibeng healthcare sub-district. Clusters names are Bapong, Ikhutseng and Jericho.

The researcher will invite participants to voluntary participate in this research study. I promise to adhere to all scientifically, legally and morally acceptable ethical conduct. No risks or discomfort will be experienced from participating in the focus group discussions and semi-structured interviews. Confidentiality and anonymity will be ensured at all

times during the research study. Ethical approval from the University of South Africa will be sent with the research proposal to the North West Province Department of Health's Research Committee prior to the collection of data from the healthcare sub-district, namely: Madibeng.

I promise that I will inform the participants about the extent of utilisation of the data derived from the research. Any of the attendants who are willing to and volunteer to participate in the research project will be eligible. Please be assured of my utmost integrity in this project, which will not be invasive whatsoever; neither will I cause any harm to any participants because there is no treatment nor medication of any kind.

I shall carry out the study in strict accordance with the approved proposal requirements of the ethics policy of UNISA, and trust that my application will be favourably considered.

My contact details are as follows:

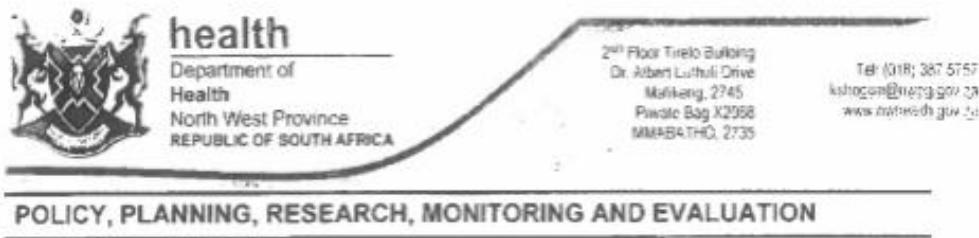
0725201130/ 012 4296180 (Telephone Numbers)
habeddsk@unisa.ac.za (email address)

Yours faithfully



Debbie Kgomotso Habedi

APPENDIX B: NORTH WEST PROVINCE DEPARTMENT OF HEALTH PERMISSION TO CONDUCT RESEARCH



To : Ms D.K Habedi

From : Policy, Planning, Research, Monitoring & Evaluation

Subject: Research Approval – Strategies to facilitate the accessibility and availability of the PMTCT programme in the Bojanala Health District of the North West Province: South Africa

Purpose

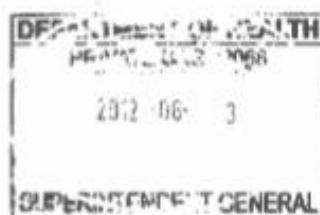
To inform Ms D.K Habedi that permission to undertake the above mentioned study has been granted by the North West Department of Health. The researcher is expected to issue this letter as proof that the Department has granted approval to the districts or health facilities that form part of the study.

Arrangements in advance with managers at district level or facilities shall be facilitated by the researcher and the department expects to receive the final research report upon completion.

Kindest regards

Director: Policy, Planning, Research, Monitoring & Evaluation
Mr B Redlinghys

10/8/12
Date



Healthy Living for All

APPENDIX C: UNISA ETHICAL CLEARANCE CERTIFICATE



**UNIVERSITY OF SOUTH AFRICA
Health Studies Higher Degrees Committee
College of Human Sciences**

ETHICAL CLEARANCE CERTIFICATE

HSHDC/37/2012

Date of meeting: 19 March 2012 Student No: 3240-176-0
Project title: Strategies to facilitate the accessibility and availability of the PMTCT programme in the Bojanala Health District, North West Province, South Africa
Researcher: Debbie Kgomoatso Habedi
Degree: D Litt et Phil Code: DPCHS04
Supervisor: Prof AGW Nolte
Qualification: D Litt et Phil
Joint Supervisor: Dr A Ternane

DECISION OF COMMITTEE

Approved

Conditionally Approved

Prof E Potgieter

Potgieter

CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE

Dr MM Moleki

Moleki

ACTING ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRIES

[Open Rubric](#)

University of South Africa
Private Bag X20 0000 Unisa 0002
PO Box 350 UNISA 0002 South Africa
Telephone +27 12 429 3111 Facsimile +27 12 429 4
www.unisa.ac.za

APPENDIX D: INFORMED CONSENT FOR HIV-POSITIVE PREGNANT WOMEN

1178 Unit X Extension

Mabopane

0190

07 January 2013

To: The Participant

I Debbie Habedi; am conducting a research study as required for D.Litt et Phil in Health Studies at the University of South Africa (UNISA) under the supervision of Prof A.Nolte and Dr A.Temane.

I wish to invite you to participate in this research study entitled: "Strategies to facilitate the availability and accessibility of the PMTCT programme in the Bojanala Health District". The main purpose of this study is to determine the availability and accessibility of the PMTCT programme in the Bojanala Health District of the North West Province, with an aim to develop strategies to facilitate the availability and accessibility of the PMTCT programme to HIV-positive pregnant women. The study has been approved by Ethics Committee of UNISA and the North West Departmental Research Committee. As a participant you will be required to participate in semi-structured interview that will last between 30 and 60 minutes approximately. The semi-structured interview will take place in Madibeng sub-district. The date, time and venue will be given to you beforehand. The semi-structured interview will be with your permission audio taped. There will be no risks involved or discomfort to you in sharing your experiences about the availability and accessibility of the PMTCT programme.

Confidentiality and anonymity will be ensured during the semi-structured interview. Your name, or identifiable information will not be used or appear on any transcripts. Data will only be accessed by the researcher, supervisors and independent coder. All data will be kept in a secure place and will not be shared with any other person without your permission.

Your participation in this study is voluntary and you have the right to withdraw at any time of the research study without penalty. The findings of the study will be used to develop strategies to improve the availability and accessibility of the PMTCT programme in the district. The results of the study will be made available to you upon request.

I have had sufficient opportunity to read the consent form and ask questions and (of my own free will) declare myself prepared to participate in the study.

Participant's Signature Date

I herewith confirm that the participant has been fully informed about the nature and conduct of the study.

Researcher's Signature Date.....

Researcher's Contact details:

0725201130/ 012 4296180 (Telephone numbers)

habeddsk@unisa.ac.za (email address)

APPENDIX E: BIOGRAPHICAL DATA OF HIV-POSITIVE PREGNANT WOMEN

	Biographical Category	Data
1.	Age of participant	
2.	Ethnic group (e.g. Tswana, Zulu etc)	
3.	Home Language	
4.	Area of Residence (Cluster)	
5.	Marital Status	
6.	Educational Level	
7.	Employment Status –self Employment – husband/partner	
8.	Number of Children	
9.	Any Infant Deaths/Miscarriage/still birth? If yes, how many?	
10.	Religion	

APPENDIX F: INTERVIEW GUIDE FOR HIV-POSITIVE PREGNANT WOMEN

1. Interview

Interview No:

Date of Interview:

Time of Interview.....Start.....Finish

2. Central Question

Tell me about your experiences of the availability and accessibility of the PMTCT programme in Bapong/Ikhutseng/Jericho of Madibeng sub-district in Bojanala Health District.

3. Probing Questions

- What services are there for you in Bapong/Ikhutseng/Jericho as a HIV-positive pregnant woman?
- What is your experience with the availability and accessibility of the PMTCT programme?
- What is your experience about the PMTCT programme services rendered at the ante natal clinic?
- What information do you need about the PMTCT services in Bapong/Ikhutseng/Jericho?
- How could the nurses/ doctors at the antenatal clinic services in Bapong/Ikhutseng/Jericho assist you as a HIV-positive pregnant woman enrolled in the PMTCT programme?

Thank You for Your Time!

APPENDIX G: INFORMED CONSENT OF HEALTH CARE WORKERS

1178 Unit X Extension

Mabopane

0190

07 JANUARY 2013

To: The Participant

I Debbie Habedi; am conducting a research study as required for D.Litt et Phil in Health Studies at the University of South Africa (UNISA) under the supervision of Prof A. Nolte and Dr A.Temane.

I wish to invite you to participate in this research study entitled: "Strategies to facilitate the availability and accessibility of the PMTCT programme in Bojanala Health District of the North West Province." The purpose of the study is to determine the availability and accessibility of the PMTCT programme in the Bojanala Health District of North West Province. The study has been approved by Ethics Committee of UNISA and the North West Departmental Research Committee. As a participant you will be required to participate in focus group discussion that will last between 30 and 60 minutes approximately. The focus group will take place in the Madibeng sub-district. The date, time, venue will be given to you beforehand. The focus group discussion will be, with your permission audio taped. There will be no risks involved or discomfort to you in sharing your knowledge about the availability and accessibility of the PMTCT programme.

Confidentiality and anonymity will be ensured during the focus group discussion. Your name, or identifiable information will not be used or appear on any transcripts. Data will only be accessed by the researcher, supervisors and independent coder. All data will be kept in a secure place and will not be shared with any other person without your permission.

Your participation in this study is voluntary and you have the right to withdraw at any time of the research study without penalty. The findings of the study will be used to

develop strategies to improve the availability and accessibility of the PMTCT programme in the District. The results of the study will be made available to you upon request.

I have had sufficient opportunity to read the consent form and ask questions and (of my own free will) declare myself prepared to participate in the study.

Participant's Signature Date

I herewith confirm that the participant has been fully informed about the nature and conduct of the study.

Researcher's Signature Date.....

Researcher's Contact details:

0725201130/ 012 4296180 (Telephone Numbers)

habeddsk@unia.ac.za (email address)

Witness's Signature.....Date.....

APPENDIX H: BIOGRAPHICAL DATA OF HEALTH CARE WORKERS

	Biographical Category	Data
1.	Age of participant	
2.	Category of Health Care Professional (Nurse/Doctor etc)	
3.	Area of work (Cluster)	
4.	Marital status	
5.	Educational Level	
6.	Years of work experience with HIV-positive women	
7.	Religion	

APPENDIX I: INTERVIEW GUIDE FOR HEALTH CARE WORKERS

1. Interview

Interview No:

Date of Interview:

Time of Interview.....Start.....Finish.....

2. Central Question

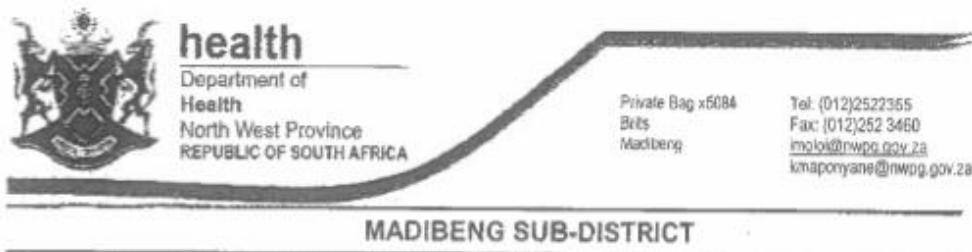
Tell me about your experiences of the availability and accessibility of the PMTCT programme in Bapong/Ikhutseng/Jericho.

3. Probing Questions

- What challenges have you experienced as a Health Care Workers rendering the services of the PMTCT programme in Bapong/Ikhutseng/Jericho?
- What could be done to assist HIV-positive pregnant women attending PMTCT programme?
- What recommendations/suggestions would you like to make in regards to availability and accessibility of the PMTCT programme? **OR**
- What do you think could be done to make the PMTCT programme more available and accessible for the HIV-positive pregnant women?

Thank You for Your Time!

APPENDIX J: PERMISSION LETTER TO USE THE MADIBENG HEALTH SUB-DISTRICT FACILITIES



Enq: C. Maponyane

11 December 2012

To: Ms. D. Habedi
University of South Africa

Dear Madam,

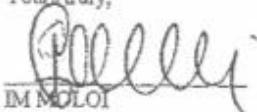
PERMISSION TO USE OUR FACILITIES

This letter hereby serves to authorize you to have access to the facilities in which you wish to conduct research on 'Strategies to facilitate the accessibility and availability of the PMTCT programme in Bojanala'. The staff is expected to support and assist you in the exercise.

This is in response to your request sent to the office of the Sub-District Manager.

Hope you find this in order.

Yours truly,


IM MOLOI
Sub-district Manager

1


Healthy Living for All

**APPENDIX K: TABLE OF PARTICIPANTS – HIV-POSITIVE PREGNANT WOMEN
(N=10)**

Code	Age	Ethnic group	Home language	Residential area	Marital status	Educational level	Employment Status-self	-partner	No of children	Religion
P1	20	Tsonga	Setswana	Bapong	Single	Passed Grade 11	No	Yes	0	Christian
P2	34	Tsonga	Shangaan	Bapong	Single	Never attended school	No	No	2, had ectopic pregnancy in 1999	Old Apostolic
P3	30	Sotho	Sesotho	Bapong	Single	Passed Grade 7	Yes-firm	Yes-mine	0	Miracle Centre
P4	31	Tswana	Setswana	Bapong	Single	Passed Grade 8	No	No	3	Zion
P5	18	Tswana	Setswana	Bapong	Single	Passed Grade 11	No	Yes-mine	0	Roman Catholic
P6	32	Tswana	Setswana	Ikhutseng	Single	Passed Grade 10	No	Yes-brewery	1, had Miscarriage in 2005	East Heaven Church
P7	39	Zulu	Zulu	Ikhutseng	Single	Passed Grade 9	No	Yes-brewery	3	Twelve Apostolic
P8	29	Tswana	Setswana	Jericho	Single	Passed Grade 10	No	Yes-mine	0	Flame
P9	24	Tswana	Setswana	Jericho	Married	Passed Grade 12	No	Yes-firm	0	Apostolic church
P10	21	Tswana	Northern Sotho	Jericho	Single	Passed Grade 12	No	Yes-Police	0	Roman Catholic

(P=Participant)

APPENDIX L: TABLE OF PARTICIPANTS – HEALTH CARE WORKERS (N=21)

Code	Age	Category	Area of work	Marital Status	Educational Level	Years of work experience with HIV-positive pregnant women	Religion
P1	49	Professional Nurse	Bapong Cluster	Single	Diploma in General Nursing Science, Community, Midwifery and Psychiatry	12	Christian
P2	44	Professional Nurse	Bapong Cluster	Married	Diploma in General Nursing Science	15	Lutheran
P3	38	Professional Nurse	Bapong Custer	Single	Diploma in General Nursing Science	02	Reformed Church
P4	44	Professional Nurse	Bapong Cluster	Married	Diploma in comprehensive Nursing Science	10	Apostolic
P5	33	Professional Nurse	Bapong Cluster	Single	Diploma in General Nursing Science	02	Christian
P6	28	Enrolled Nurse assistant	Bapong	Single	Auxiliary Nursing	02	Christian
P7	26	Professional Nurse	Bapong	Single	Diploma in General Nursing Science	02	Christian
P8	59	Professional Nurse	Ikhutseng	Single	Diploma in General Nursing Science	02	Inter-Pentecostal Holy Church
P9	28	HIV/Aids Counsellor	Ikhutseng	Single	HIV Counselling Certificate	02	Christian
P10	33	Post Basic Pharmacist Assistant	Ikhutseng	Single	Post Basic Pharmacist Assistance and HIV/Aids management	03	Mission Church

Code	Age	Category	Area of work	Marital Status	Educational Level	Years of work experience with HIV-positive pregnant women	Religion
					Certificates		
P11	50	Professional Nurse	Ikhutseng	Married	Diploma in Midwifery, Diploma in Primary Health Care Nursing and Degree in Community Nursing Science & Administration	02	African Methodist Church
P12	42	Professional Nurse	Ikhutseng	Single	Diploma in General Nursing Science	03	Christian
P13	37	Professional Nurse	Ikhutseng	Married	Diploma in General Nursing Science	02	Christian
P14	30	M2M Mentor Mother	Ikhutseng	Single	Certificate in Professional Counselling	04	Christian
P15	49	Professional Nurse	Ikhutseng	Divorced	Diploma in General Nursing Science, Midwifery, Primary Health Care, Degree in Occupational Health Nursing	08	Uniting Reformed Church
P16	36	Professional Nurse	Jericho	Married	Diploma in General Nursing Science, Midwifery, Community and Psychiatry	06	Christian
P17	53	Professional Nurse	Jericho	Married	Bachelor of Nursing Science	22	Christian
P18	28	Professional Nurse	Jericho	Married	Diploma in General Nursing	03	Christian

Code	Age	Category	Area of work	Marital Status	Educational Level	Years of work experience with HIV-positive pregnant women	Religion
					Science, Midwifery, Community and Psychiatry		
P19	30	HIV/Aids Counsellor	Jericho	Single	Certificate in HIV/Aids Counselling	02	Reconciliation
P20	34	HIV/Aids Counsellor	Jericho	Single	Certificate in HIV/Aids Counselling	02	Porter's House Christian
P21	45	Enrolled Nurse Assistant	Jericho	Married	Enrolled Nurse Assistant	06	Christian

APPENDIX M: TSWANA INFORMED CONSENT FOR HIV-POSITIVE PREGNANT WOMEN

1178 Unit X Extension
Mabopane
0190
07 Ferikgong 2013

Go: Motsayakarolo

Nna, Debbie Habedi, ke dira dipatlisiso tsa thuto jaaka go tlhokega mo dithutong tsa Bongaka mo lefapheng la Boitekanelo kwa setheong sa thuto e kgolo sa Aferika Borwa. Ke kopa go laletsa motsayakarolo mo dipatlisisong tsa go tlhama ditogamaano go etleetsha go nna teng ga lenaneo la thibelo ya mogare kgotsa kokwanatlhoko ya HIV go tswa go mme go ya go lesea la gagwe. Jaaka motsayakarolo o tla kopiwa go araba dipotso tse di tla go tsayang metsotso e le 30 go fitlha go e le 60. Dipotso tse tsa dipatlisiso di tlie go tshwarwa mo kgaolong ya Madibeng. Letlha, Nako le Lefelo di tlie go romelwa nako e sale teng. Dipoledisano di tlie go gatisiwa ka segatisa mantswe. Ga go na dikotsi dipe tse di tla go tlhagelang fa o arogana kitso le maitemogelo a gago ka ga go nna teng ga lenaneo la thibelo ya mogare gongwe kokwanatlhoko ya HIV go tswa go mme go ya go lesea la gagwe.

Dipatlisiso tsotlhе tsa dipuisano di tlie go tshwarwa ele sephiri le leina la gago ga le ne le itsiwe ke ope. Go tlie go itse Mmatlisisi, Bagolwane ba gagwe le yo o gatisang mantswe a puisano. Tshedimosetso yotlhе e tlie go lotlelwа mo le felong le le babalesegileng ebile ga e ne e aroganwa le ope. Ke a dumelesega go ikgogela morago fa ke sa batle go tsaya karolo.

Ke filwe tshono ya go buisa foromo ya dipatlisiso le go botsa dipotso, jaanong (Nna ka bona) ke a itlama go tsaya karolo mo thutong e.

Motsayakarolo..... Letlha.....

Ka netefatsa gore motsayakarolo o sedimoseditswe ka botlalo ka ga mokgwa wa thuto ya dipatlisiso.

Mmatlisisi..... Letlha.....